

OPTIONS  
A STUDY  
GUIDE TO  
POPULATION  
AND THE  
AMERICAN  
FUTURE

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# OPTIONS

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## OPTIONS EXPLAINED

Options is a guide for exploring population trends and their possible effects on the future. It is based on the official report of the Commission on Population Growth and the American Future, which was established by Congress and appointed by President Nixon in March 1970. The Commissioners spent two years extensively investigating the nature of U.S. population growth and distribution. They have offered their findings and recommendations in both a written and a film version with the hope of reaching the majority of American citizens.

*Options*, the film, and the written reports can stimulate useful inquiry into the implications of population growth and distribution and encourage discussion of policies designed to influence them. Young people are ready for this kind of involvement. Recent studies reveal a gap between young people's concern with population and their knowledge of the subject. Education about population dynamics provides a way to fill that gap.

The objective of this study guide is to foster an understanding of the Commission's concerns and recommendations by helping students:

1. To learn how population changes in the United States affect the individual and society.
2. To realize how their own actions can change the size and character of the population.
3. To evaluate the impact of population changes as well as the impact of personal and public decisions on population trends.

Note the use of the phrase "population changes" instead of the more common "population growth." This is important. Population changes include population decline as well as growth, distribution, and size.

The guide seeks to help students understand population changes in the United States. Although neither the Commission report nor this guide focuses on international population changes, students should understand that what happens in the United States has impact on the rest of the world and vice versa.

The classroom activities suggested

in the guide are in no way designed to encourage automatic acceptance of the Commission's views, some of which are controversial. Rather, they encourage a critical examination of the methods, information, assumptions, and values on which the Commission built its recommendations. These activities provide room for dissent; for each one the values and assumptions that underlie conflicting points of view are delineated. Thus the student can identify the principles on which his or her own opinions may be based.

### How to Use Options

*If you are a teacher:* Sufficient material is included for a complete course. Its scope and the key issues involved can be introduced by and used in conjunction with showing the film, *Population and the American Future* (see Selected References, page 73). It is also possible to use parts of the discussion and activity sections of the guide to create a short study unit or to supplement a related course in the natural sciences or social studies.

*If you are a community group leader:* The guide offers ample source material for a forum, a weekly discussion group, or a seminar series.

Whatever your role or schedule, you are encouraged to involve your students or participants through the activities. The discussion section does provide possible lecture guidelines, but the basic educational objectives are best achieved through individual involvement.

The activities are offered for use at three age levels: junior high school, high school, and adult. You, as teacher or leader, know your audience and can best choose which activities fit their needs and interests.

The discussion that follows includes in a condensed form the main issues faced by the Commission. It provides a factual basis for teaching the issues. By portraying the individual as a "population actor," you should be able to help your students or group members see the important role each of them plays in the American future.





# DISCUSSION

## I THE COMMISSION

A movement to address population growth in the United States has gained momentum at a time when the birth rate is at an all-time low. Although population experts recognize the downward trend, they are quick to point out that the U.S. population will continue to grow for at least 70 years into the future.

The fact is that our population has a potential for future growth greater than that of almost any other advanced country. The reasons for this are a pattern of early and nearly universal marriage and childbearing and a large proportion of youth in the population. The youngsters born during the baby boom that followed World War II are reaching adulthood today and are doing the things their parents and grandparents did before them—finishing school, seeking jobs, developing careers, getting married, and having children of their own.

So our future is uncertain. Only if the present generation completed its childbearing years with an average of two children and the next generation in turn reached an average family size of two children or less would the U.S. population stop growing.

Population change was cited as one of the most serious challenges facing the country when President Nixon and the Congress established the Commission on Population Growth and the American Future. The President said, "Whether man's response to that challenge will be a cause for pride or despair in the year 2000 will depend very much on what we do today."

The Commission included men and women of various ages and ethnic backgrounds; their interests represented law, medicine, business, religion, education, and government. They were people who could assess the research of the nation's leading population scientists and the sentiments of concerned citizens who testified in public hearings. The Commissioners were guided by a commitment to develop population policies "in full

Photo by  
William S. Weems

consonance with the fundamental values of American life: respect for human freedom, human dignity, and individual fulfillment; and concern for social justice and social welfare."

The Commission's recommendations reflect these human values. But they also are the result of a process of group decision-making: the desire for consensus shaped the final recommendations. On some of the most controversial issues, the Commissioners could not reach complete agreement on proposals for action, and they candidly admitted it.

One issue on which they were in complete accord was the need for population education. Because population changes occur slowly, almost imperceptibly, they attract little notice and less concern. Although the phrase "population explosion" caught the public's interest for a time, it did little to enhance public understanding about population processes. A 1971 poll conducted by the Commission revealed that six out of ten of those interviewed could not estimate the population of the United States within 50 million persons. Young people, many presumably still in school, are as uninformed as their parents.

Americans who are unaware of current growth and distribution trends may not understand the ways these trends intensify many familiar problems. When we push our way onto a crowded subway or creep along bumper to bumper on a crowded highway or wait long hours in a hospital clinic or try to find decent housing in the central city or try unsuccessfully to find a job, we are confronting in a very personal way the problems intensified by population change. Dirty air, shortage of water, urban sprawl, and the death of many rural communities—all of these problems are aggravated by the unheralded population changes that have taken place in America in the last 50 years.

If we are to succeed in improving the quality of life in the United States, the problems of population growth and distribution should be considered along with those of poverty, discrimination, exploitation of resources, and international conflict. Since all of these problems are interwoven, resolving population problems may con-

tribute to easing other difficulties.

Population changes not only affect each of us personally, but each of us in turn makes choices that create the changes. Will a couple decide to have no children or two, three, or six children? It might seem that such a decision could not significantly affect the nation as a whole. Not so. The Commission noted that if, on the average, couples in the United States have two children (and if immigration remains at present levels) the population will grow to 271 million by the end of the century. If, on the other hand, we have an average of three children per family, the population will rise to 322 million by the year 2000—a difference of 41 million people! Personal decisions have ramifications that extend far beyond the confines of a single family.

No consideration of our personal futures or the future of the nation is complete without recognizing how population change affects our lives. It is not only the number of people in this country, but the way in which they are dispersed throughout the land that vitally affect each of us. The following discussion traces the paths that link these seemingly remote processes with the quality of our lives, which is of immediate concern to us all.

# II

## EACH OF US: A POPULATION ACTOR

Whether we are conscious of it or not, whether we intend it or not, each of us is a population actor. Each of us participates in population processes. Sometimes we have control over these processes; other times not. Sometimes we are aware of our influence; too often we are not.

For instance, none of us has control over our own birth or death, yet each of us contributes to the country's birth rate and death rate. When we as individuals can choose whether to marry and when, the number of children to have, where to live, how to get to work, or where to spend vacations, we have control over population-related actions. All of these actions involve us in population processes.

But few of us are completely free to live as we choose or where we choose. A decision to move from the city to the suburbs, for instance, is affected by such practical realities as the opportunities for jobs, transportation, housing, and credit. Racial and sex discrimination also inhibit our freedom to move at will. Nor is it reasonable to expect that a man and woman can plan each birth if they don't have access to both fertility control information and services.

We are all participating in population change, but no one of us can create or solve the resulting problems alone. Population problems *affect* us individually but *result* from an aggregate of decisions.

Consider the patterns of population distribution that have led to the growth of our large metropolitan centers. The movement of people into suburban communities surrounding U.S. cities has sharply changed the patterns of residence in this country. At the turn of the century, half of all Americans lived on farms or in small villages. Today seven of every ten

persons live in metropolitan areas, that is, in cities of 50,000 or more and the surrounding counties that are economically integrated with them. Between 1960 and 1970 the metropolitan population of the United States grew 23 percent, largely through the growth of suburbia. Future metropolitan growth will occur with the continued expansion of these suburban areas.

An aerial view of a metropolitan area may give the misleading impression that the suburbs were developed in accordance with some grand blueprint. But this redistribution of population involved thousands of separate decisions made by individuals and groups who acted as home-buyers, builders, realtors, and lenders. This transformation is one of the most impressive results of population changes in the nation's history. Combined with poor planning, it has resulted in some of our worst problems—congestion, pollution, and shortage of recreation space.

Who builds suburbia? Population actors—people who move to the suburbs or who somehow influence others to move. It's not often that the people who are moving consider the demographic consequences of their decisions. Nor is it realistic to expect such decisions to be geared to the likely population outcome. Many of us have no choice in this matter. We move because of housing costs, location of available jobs, and other factors. But at least by acknowledging the impact that we make collectively, we realize our stake in the process of community planning. If community consequences are ignored, the quality of common or public resources easily can deteriorate.

The problems resulting from population movement do not simply involve more or fewer people. The speed with which a community gains



Lorraine W. Gray—  
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or loses people, or the rate of change, is often at the core of adjustment problems. Migration, both in and out of a community, signals a process of adjustment between the changing population and the social and economic activities of the community. The settlement patterns of today's 5 million young adults, who are marrying and becoming parents, will determine where future population growth occurs and where added demands for housing, health, and education services will be felt.

Clearly, we participate and have an important stake in a variety of population processes. The following discussion of life cycles may help us see our own roles as population actors more easily.

### **Birth: We've All Been Through It**

The birth of a new baby usually fills parents with a mixture of feelings. Tenderness and love may predominate, but there are also realistic concerns about the responsibility, the expense, the pile of diapers, and the midnight feedings. It is hardly surprising that parents don't also think of their newborn son or daughter as a "population event."

To its parents, the newborn is Larry or Carrie, Jerry or Beth. To society the newborn will be an addition to school enrollment, the labor force, the armed forces and a consumer of social and health services.

In the hospital nursery all babies appear to be much alike with the same prospects before them. But they are not alike. All are born as the result of the actions of an earlier generation of population actors; their advent into this world may have been an intended or — unfortunately — an unintended consequence of their parents' sexual activity. For a variety of reasons—including youthful marriage or accidental pregnancy—many parents will have children before they want them and many will have more children than planned. According to a recent national study 44 percent of all births between 1966 and 1970 were unplanned, and 15 percent were reported as having been unwanted.<sup>1</sup>

It would be a mistake, however, to assume that all unwanted pregnancies

necessarily result in unwanted children. Many, perhaps most, of the children are eventually accepted and loved.

All the children born during the same year have one thing in common. They are members of the same birth cohort. Recession, wars, and certain other economic, political, and social events will occur at the same points in the lives of each member of that cohort.

Babies born in 1920 experienced the Great Depression that began in 1929. World War II was another event shared by this cohort. Many died in that war; for others, marriage and childbirth had to be postponed until after the war. This cohort's contribution to the postwar "baby boom" can only be understood if we take these earlier events into consideration. Similarly, the cohorts of persons born during the 1970s will be affected by coming shifts in the economy, by swiftly changing sexual and social mores, by the extent to which racial discrimination continues to inhibit equal opportunity, by new attitudes toward women, and by our awakening concern for the environment—all these will shape the values of the generation now growing up.

### **Growing Up—Picking Up Roles**

A child does not make many population decisions directly, but he learns the values that will condition decisions made later in life. The young child observes the daily activities of family life and begins to understand the responsibilities involved in creating a home. It is here that the child initially learns his role as a population actor. Later, these roles are reinforced or challenged by other influences—school, church, peers.

A number of population events can and do occur during this period of the child's life. The birth of brothers or sisters creates changes that will affect the family and each member in it. Additions to the family will affect its financial and emotional resources and thus will influence the development of each child. Similarly, because of changes in the father's or mother's employment, or for some other reason, the family may move from one place

<sup>1</sup> 1970 National Fertility Study conducted by the Office of Population Research, Princeton University.

to another. The migration of this family may have important consequences for the child as well as for others. The community may or may not be prepared to provide his parents with satisfactory housing and adequate social services or to welcome the child into a new school or playground.

### **Coming of Age— Decisions, Decisions**

A crucial period stretches between the ages of 15 and 25. During this time the population actor is faced with a series of decisions: whether to go on to college after completing high school, the selection of a vocation or profession, where to live and work, if and when to marry and if and when to have children. Some of these decisions will be made consciously, others unconsciously, and still others will be made automatically in accord with the values and expectations learned in childhood.

Most young population actors take marriage for granted. A majority not only marry, but they marry at about the same period of their lives. In 1970 the median age at first marriage was 23.2 for men and 20.8 for women. An overwhelming majority of these couples expect to have children and most want two or three. Such conformity is not coincidence; it indicates that most of us are following accepted behavior patterns. But not all population actors follow these common patterns of childbearing. For some, larger families are desired. For others, babies arrive too often or too early. Just as the population actor may have been "unwanted" or "unplanned," his children may arrive in the same fashion.

Girls who become pregnant as adolescents face particular problems. In 1968 more than one of every six children was born to a mother under 20 years of age. More than 25 percent of these children were born out of wedlock.<sup>1</sup> A national study of unmarried teen-aged girls indicated that 14 percent of the 15-year-olds and 46 percent of those who were 19 reported having had sexual relations. Yet only 20 percent of these girls used contraception regularly.<sup>2</sup>

Clearly, teen-agers and young adults face an almost bewildering array of events, each of which will influence later behavior. Decisions faced at this age are not limited to reproductive activity. Late adolescence and early adulthood are also periods in which the first decisions are made about migration. Nearly 40 million Americans, or one in five, move each year. About one-third of these migrants are in their twenties and move to take new jobs or to finish their education.

### **The Middle Years**

These are the years in which the role of citizen is the crucial one for population actors. Through the electoral process and group action, every individual has an opportunity to help make decisions about numerous policies affecting his community, state, and nation. Population processes are often affected by these public decisions regarding land zoning, recreation and housing, education, day care programs, health services, and so on. All these decisions may have substantial influence on population change, both locally and nationally.

These middle years also are a time when most of us are highly productive in the economic sector as well as in the home. The burden of supporting the dependent members of the population—the sick and disabled, the very young and the very old—is heaviest during these years.

### **Retirement: Looking Back**

In retirement the population actor is able to look back at a society that he helped to shape. The course of population growth as well as the issues confronted in suburbia, rural areas, and urban centers were influenced by his decisions. But perhaps most importantly, his decisions about reproduction have helped to set forces into motion that will continue for a long time. As the population actor completes his lifetime, his grandchildren will begin to have children of their own. This fourth generation and those who survive from the three that precede it will form the population of the United States in the middle of the twenty-first century.

<sup>1</sup> Commission on Population Growth and the American Future, *Population and the American Future* (1972), p. 88. Cited hereinafter as Commission Report.

<sup>2</sup> *Ibid.*, p. 85.

# III

## POPULATION GROWTH AND DISTRIBUTION

Millions of population actors—responding to similar values, economic and social pressures, and hopes for the future—behave in similar ways. The resulting shifts in population growth and distribution then change our lives by affecting the economy, natural resources, governmental services, and social conditions.

### The Economy: Is “More” Still “Better”?

Periods of rapid population growth in the United States have also been periods of rapid economic growth. It is not surprising, then, that the notions often held by business and civic leaders that “growth is good” and “more is better” continue to find adherents. The Commission on Population Growth and the American Future studied every aspect of economic prosperity, asking such questions as: Does a healthy economy require a growing population? Would a slower rate of population growth help or hurt business and the workers’ position in the economy? What would be the economic consequences for most people if population growth approached zero?

**Income.** The rate of population growth will have a significant effect on per capita income. The Commission’s research indicated that in the year 2000 per capita income may be as much as 15 percent higher under the 2-child than under the 3-child population growth rate. There are two principal reasons for this.

- Fewer babies would mean that a larger percentage of the population would consist of working-age adults; in other words, the work force would comprise a larger percentage of the total population than it does now.
- Fewer babies would mean more

working women, and this too would add wage earners to the economy.

Together, these trends would mean more wage earners and fewer children. The total earned income would increase and be shared with fewer dependents, and therefore the average amount of money available for each individual would increase. This might be a mixed blessing, however. An increased per capita income has not eliminated poverty in the past and most likely would not do so in the future. Nor does it mean we will solve our environmental problems. Moreover, increased per capita income gives us the potential for increased consumption, which in turn may further strain resource quality and supply.

**Business.** Under the 2-child projection, the number of births each year would stay within the range of 3-4 million, where it has been since the early 1960s. This would be so despite decreasing fertility because the postwar years of rapid population increase resulted in a larger number of young couples who are having children today. The Commission also noted that a slower rate of population growth due to a 2-child average would cause *total* as well as *per capita* income to be higher for at least the next 15 years than would be the case with a faster rate of population growth. Sustained demand for goods and services is therefore assured.

It is true that there would be a faster increase in the sales of certain products, such as baby foods and milk, under conditions of higher population growth. But it is also true that the Commission found no industry among those it studied—from mobile homes and clothing to frozen foods and domestic cars—that would not in-

crease sales by the year 2000 with our population growth rate at the 2-child average.

The question, "Is more still better?" remains unanswered. We may still face familiar problems unless production and consumption patterns change. Consumers may have to change their buying habits and industries may have to reassess production processes if slowing or stopping population growth is to bring tangible improvements.

### **Social Aspects: The Majority-Minority Myth**

The evidence indicates that, on the whole, people would benefit if the nation were to move toward a non-growing population. The slowing of population growth, however, is not a cure for all of the nation's economic and social ills. The benefits that would occur might be denied to individuals most in need of them—the aged and those who are victims of discrimination, incapacity, and inadequate training. For these persons, other deliberate changes must be made if they are to share in the benefits of slower population growth. Moreover, measures to achieve an improved distribution of income should be beneficial demographically as well as socially. Evidence indicates that levels of child-bearing—both wanted and unwanted—decline as income rises.

Seventy percent of our annual increase in population is attributable to the white middle-class majority. The prevalent idea that our population growth is primarily generated by the poor and by minorities is a myth. Nonetheless, there is a strong relationship between family size and the economic problems that afflict the people who are poor, and many minority families regard unwanted child-bearing as a serious personal problem. In fact, the stated family size desires of people are quite similar, regardless of race.<sup>1</sup> When minority group members move into the mainstream as a result of additional education and higher income, their actual family size levels off to about that of the rest of the population. College-educated blacks, for instance, have fewer children, on the average, than whites with the same education.

### **Resources and the Environment: "Coping" Is a Risky Business**

From the standpoint of resources and the environment, coping with population growth for the next 30 to 50 years will become an increasingly unpleasant and risky business—unpleasant because "coping" with growth means adopting solutions we don't like; risky because it means adopting solutions before we understand them.

The Commission examined the impact of different rates of population growth on several environmental factors:

**Mineral Resources.** A study prepared for the Commission of the demand for 10 major nonfuel minerals led to the conclusion that the amount of minerals consumed in the year 2000 would average 9 percent lower if the 2-child projection rather than the 3-child projection were realized. Annual consumption of minerals would be 17 percent lower in the year 2020.

**Energy.** Our energy needs will be immense under any population projection, although not as large if the 2-child rather than the 3-child population projection is realized. The ability of the United States to meet its future energy needs will be determined chiefly by developments in the technology of acquiring and converting fuel. The big question is whether the new technology we develop will be environmentally safe. With no major changes in technology, oil and gas supplies could become an even more serious problem for the United States than at present. Already some fossil fuels are in short supply and soon we may be importing more and paying higher prices.

If we could unlock the secrets of atomic fusion, we could have an environmentally clean way of producing electricity, with no fuel supply problem. Of course, the faster population grows, the more urgent such a breakthrough becomes.

**Water.** Water requirements already exceed available supply in many parts of the United States, and growing population and economic activity will expand these areas of water shortage. "Sooner or later we will have to deal with water as a scarce resource," the

<sup>1</sup> Reynolds Farley, "Fertility and Mortality Trends Among Blacks in the United States," in Charles F. Westoff and Robert Parke, Jr., eds., *Demographic and Social Aspects of Population Growth*, vol. 1 of Commission research reports, U.S. Commission on Population Growth and the American Future (1972), p. 122.



Commission reported. "Few will like the austerity created by the need to conserve on something as fundamental as water."

**Agricultural land and food prices.** According to the Commission's analysis of our food-growing capacity, in 50 years we could find ourselves paying food prices 30-50 percent higher if population grows at the 3-child rate rather than at the 2-child rate. Feeding a growing population without doing further damage to the environment would mean restricting the use of pesticides and fertilizers. This, along with declining soil quality, may influence the high yield per acre we now enjoy. To the food demands of the U.S. population must be added the demands of other countries who look to the United States for food imports when crop failures occur.

**Pollution.** In studying the contribution of population to pollution, the Commission distinguished between two broad classes of pollutants. One class includes the major products of combustion as well as several kinds of water pollution. The other includes pollutants that endure longer—radiation and pesticides.

The Commission's research focused primarily on the first class of pollutants. In the next 30 years most of these can be eliminated by enforcing emission and treatment standards. Slower population and economic growth would of course help. Whatever treatment policy we have, emissions in the year 2000 would be less with the 2-child than with the 3-child rate of population growth—from 5 to 12 percent less, depending on the pollutant. But by far the biggest reduction in pollution can be achieved by direct treatment.

In summary, population growth is clearly neither the sole nor the most important culprit in ecological damage—the impact of society on the environment is determined by a complex interaction of a number of factors, including the total number of people, their lifestyles, and their technology.

## International Implications

While the Commission's major focus was on domestic issues, it noted how extensively and inextricably the

United States is involved in the development and use of resources throughout the world. Population growth could add to our consumption of world resources, especially minerals and petroleum, at a time when the demands of other nations for these materials are expected to increase sharply.

The Commission also urged international cooperation in dealing with environmental threats. In the absence of effective international policies and programs for coping with the problems of resources and the environment, the commissioners foresaw "potentially grave issues of clashing interests among nations and world regions, which could have very serious effects on the United States."

## Immigration Dilemma

Some of us are first-generation Americans. Many more are the children or grandchildren of immigrants. It is not surprising then that those who have proposed curtailing immigration as a means of limiting population growth have encountered vigorous protest. The belief that America's doors must always be open to "the homeless, tempest-tossed" is sacred to many of us.

Current immigration laws allow nearly 400,000 immigrants to enter the United States each year. This is a substantial addition to the American population. At this rate, if the average immigrant couple had two children, then immigration between 1970 and 2000 would account for almost a quarter of the total population increase for that period. To complicate the issue, an enormous number of people enter the country illegally; some estimates range as high as 2 million persons annually.

The decision to end immigration would be a very difficult one. The United States is a nation of immigrants. They provided much of the manpower and initiative that settled the colonies and opened the West. Today immigrants contribute in equally significant ways. Many are highly skilled and are needed in certain occupations and professions.

One way to trim population growth in the United States, however, would

be to reduce immigration. This might have an additional advantage in the employment market, since immigrants undoubtedly compete for jobs. But the Commission preferred to recommend a policy to eliminate *illegal* immigration, and to maintain the present level of *legal* immigration.

### Population Distribution

It is possible to drive through large empty stretches in this country and wonder if those who talk of "population problems" aren't exaggerating. The trouble is that over 70 percent of our population is now concentrated in urban areas. This figure is likely to increase to 85 percent by the year 2000.

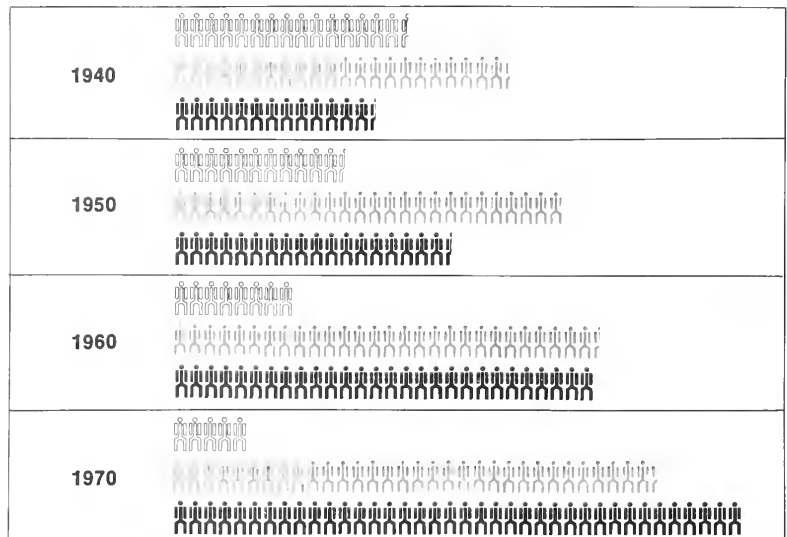
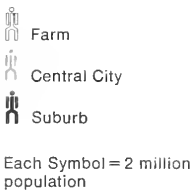
Patterns of population distribution are complex: people move from rural to urban areas, from urban areas to the suburbs, and from city to city. This creates problems. The problems result from the *rate of change* as much as from changes in absolute size. Consider some examples:

- The growth of the suburbs has taken the affluent population

away from the inner cities. Stores and businesses have followed the wealthy to the suburbs, taking jobs with them. Who have been left behind? The unskilled and the poor. Not only has this strengthened already established patterns of segregation, but the central city must now bear increased responsibility for the social and financial problems of the disadvantaged at a time when the tax base and resulting revenues have declined.

- Many small towns and rural areas have lost people. In the last few decades nearly half of the 3,000 U.S. counties have lost population. Most of these counties are in the area between the Mississippi and the Rocky Mountains, from the Canadian border to the Rio Grande, and in the Appalachian Mountains. These regions have been left with a concentration of old people who need social services, yet whose incomes are low. As the communities shrink, they lose the tax base needed to finance the services.

### FARM, CITY, AND SUBURBAN POPULATION, 1940-1970



Source: U.S. Bureau of the Census, Census of Population and Housing: 1970, *General Demographic Trends for Metropolitan Areas, 1960-1970*, PHC(2)-1 (1971).

The result has often been a deterioration of living conditions and further economic decline for the community. This in turn stimulates more outward movement as the young and better educated go to seek their fortunes in the big cities.

Even if the population of our country were to stop growing, we would still have problems associated with rural depopulation and metropolitan growth. In the Commission's final analysis, however, because natural increase (the excess of births over deaths) accounts for 75 percent of current metropolitan growth, it may be that the most effective long-term strategy for reducing local growth will be through reducing the growth of the national population rather than redistributing it.

# IV

## POPULATION AND THE AMERICAN FUTURE

Each of us plays a part in the American population scene. Collectively we create the problems and together we will create the solutions. This simple idea is crucial to an understanding of the population changes of which all Americans are a part.

If the problems seem difficult now, the future will be even more challenging. If a nation of 210 million has difficulty allocating its limited resources in the 1970s, imagine the difficulties in the year 2000, when our population will have increased to somewhere between 271 million (the 2-child average) and 322 million (the 3-child average). If we cannot remedy our urban ills with 70 percent of the population living in metropolitan areas, imagine the difficulties when that figure grows to 85 percent.

At present there are 29 large metropolitan areas (1 million persons or more) in this country. Four out of every 10 persons live in these 29 regions. If we assume that the population will grow at the 2-child rate, projections indicate that 6 out of every 10 persons will live in these conglomerate urban-suburban centers by the turn of the century. Natural increase will be the major source of this metropolitan growth.

Population growth, at least moderate growth in the short run, is inescapable. Should we try to curtail long-range growth, and if so, how?

People hold different views on these questions. Some argue that the situation is serious enough to require compulsory birth control to ensure a zero rate of population growth as soon as possible. They contend that the number of children a couple has is no longer a private matter, and that the government has a responsibility to limit family size in the public interest.

After careful consideration, the Commission rejected these arguments

for three reasons: (1) any policy affecting population must be consistent with American values, (2) a gradual movement toward a stationary (non-growing)<sup>1</sup> population would provide the nation with an opportunity to more easily solve its problems, and (3) reduced growth rates can be achieved if individual population actors are able to act on their own family planning preferences.

### Population Policy and American Values

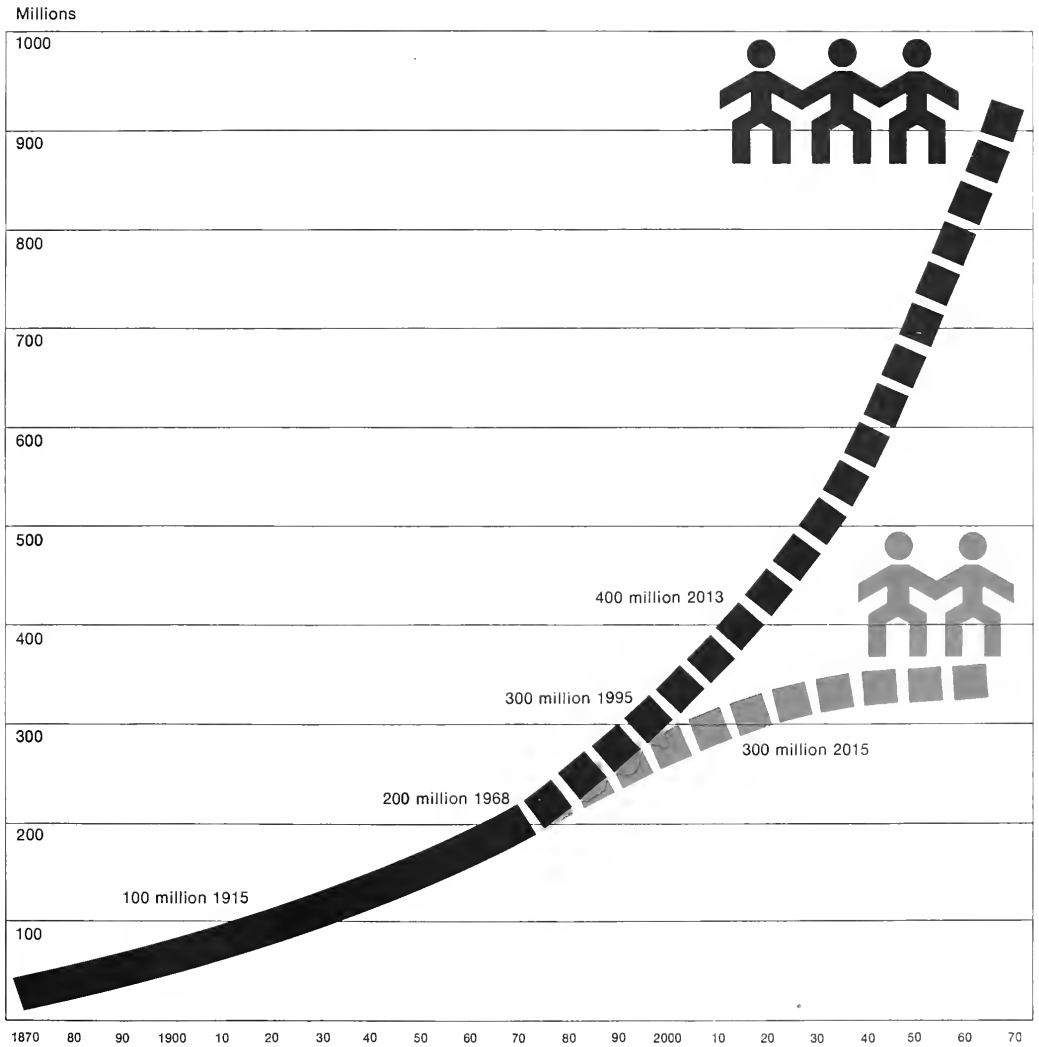
Concern for social justice and social welfare and respect for human freedom are fundamental American values. To solve population problems at the expense of these values would be an unacceptable victory. The Commission maintained that we should concern ourselves with improving the quality of life for all Americans rather than merely adding more Americans. And unfortunately, for many of our citizens that quality of life is still defined only as enough food, clothing, and shelter. All human beings need a sense of their own dignity and worth, a sense of sharing, and the opportunity to develop their individual potentialities.

But it is far easier to agree upon abstract values than on the best policies to achieve them. In fact, the Commission identified three different frameworks through which population policies could be built:

1. Some people are unable to control their fertility. Many couples have more children than they would prefer, and frequently births are unplanned. This situation suggests a lack of choice either out of ignorance or because of unequal access to family planning services.

<sup>1</sup> The Commission used the term "population stabilization" in both the Commission Report and film to describe the situation of a stationary (non-growing) population.

**U.S. Population: 2- vs. 3-Child Family**



Source: Commission Report, p. 23.  
 Note: Assuming small future reductions in mortality and future immigration at present levels.

2. Opportunities open to those in the mainstream of American life are denied to millions of other persons. Equality is denied when inadequate income and education or race or sex discrimination limit an individual's range of options. Population issues are thus tied to larger questions of social justice and full opportunity for all.
3. We are not yet fully aware of our total interdependence with the environment. The growth ethic that has been implicit in mass urban-industrialism and the destructive side effects of modern technology pose a threat to the human condition. New values that include a recognition of man's unity with nature and a new identity that transcends simple economic definitions need to be developed.

Which of these three frameworks was used by individual Commissioners is not important. What is important is that their policy recommendations are based on goals that are intrinsically desirable because they would improve the quality of life for individuals and communities. The Commission argued that slower population growth provides us with a better opportunity to improve our social condition as well as the state of the natural environment. Therefore, the Commission recommended that we welcome the trend toward a non-growing population and plan for the social opportunities and adjustments that would result.

### Non-growing Population

When the number of births comes into balance with the number of deaths over an extended period of time, the population stops growing. Except for immigration, the size of the population remains relatively constant. In other words, the number of people born equals the number who die. This is popularly called "zero population growth." Technically it is known as a stationary population. It is only possible as an average figure over time because the number of births and deaths varies slightly each year.

Reaching a population without

growth requires a replacement-level rate of fertility over a long period of time. This means that on the average, each couple will have two children, assuming present patterns of mortality. Because of the large numbers of young people approaching childbearing we must continue this pattern for about 70 years in order to reach a state of non-growth. This is not a prescription for every couple to have two and only two children. The 2-child average can be achieved in a variety of ways. Some people won't marry. Some married couples won't have any children. Other couples will have various numbers of children. The 2-child family, then, is not a standard to which every family will conform; it is an average.

The Commission examined numerous paths to a non-growing population, some taking more and some less than 70 years. For instance, one path that would take 50 years and result in a total population of 278 million rests on the following changes:

- Women on the average postponing the birth of their first child by several years and lengthening the average interval between births by about six months.
- Some women choosing not to have any children at all. An increase in the rate of childlessness from the present 12 percent to 20 percent in the future would change the average significantly.
- The proportion of parents with three or more children declining from 50 to 41 percent.
- A larger percentage of couples having one or two children (an increase from 50 to 59 percent).

In 50 years these changes would cause the population to stop growing, after a period of slow growth. This seems likely since the birth rate and average family size are now declining. Age at marriage is increasing slightly. More women are entering the labor force and are exploring alternative roles to the traditional ones of wife, homemaker, and mother. More people are concerned over the effects of population growth. And finally, surveys indicate that couples now entering their child-bearing years plan to have significantly fewer children than did the

generation of population actors before them.

There are other forces at work, however, indicating that reaching a non-growing population is not going to be an automatic process. The mystique of growth is a powerful influence in the United States. Our social and economic institutions, including the family and schools, exert strong influences in favor of marriage and child-bearing. Limited knowledge about sexuality and human reproduction prevents many from having only those children they want. Restrictions on the availability of fertility control services also prevent many people from exercising reproductive choice. In a nation where 15 percent of all births are unwanted and 44 percent are unplanned, the potential for lowering fertility is evident.

## Options for the Future

Taken together, the Commission's recommendations are an elaborate blueprint for a rational and sensitive approach to human fertility. A summary of some of their proposals follows:

- Because education plays a crucial role in developing an understanding of the causes and consequences of population growth and distribution, a Population Education Act is needed to assist school systems in establishing well-planned population education programs.
  - Parents have the chief responsibility for providing sex education. Because many feel unprepared or embarrassed to talk with their children about sex, however, model programs of sex education should be developed for use by schools, churches, and community groups.
  - States must be encouraged to eliminate the legal restrictions that impede the distribution of contraceptive information, procedures, and supplies.
  - Sexually active minors should be permitted to receive contraceptives in appropriate settings and from persons sensitive to their needs.
  - Restrictions on voluntary contraceptive sterilization should be removed so that this decision could be made solely between physician and patient.
  - Abortion should not be considered a substitute for contraception but rather as one element in a comprehensive system of maternal and infant health care.
  - A national program of family planning and fertility-related services should be established to prevent unwanted births and to improve the health of the newborn, as well as the health of all children.
  - Because limitations on the rights and roles of women diminish basic human liberties, the Commission asserted that motherhood is not necessarily more desirable than childlessness. Women must be given a choice. Both men and women must be free to develop as individuals rather than as sexual stereotypes.
- The Commission also offered alternative courses of action for improving population distribution and community planning.
- Regional, state, and metropolitan authorities should initiate comprehensive planning to achieve more rational urban development.
  - Freedom in the choice of residential location should be increased by eliminating patterns of racial and economic segregation. More suburban housing for low- and moderate-income families should be provided.
  - Governments should exercise greater control in land use and public facility planning.
  - Worker relocation counseling should be provided in order to enhance the benefits of migration.
  - A growth center strategy should be developed to expand job opportunities in urban areas located within or near those areas that are declining but have a potential for future growth.
  - State or regional development corporations should be established with power to implement comprehensive development plans—either as developers themselves or as catalysts for private development.

All of these proposals were designed to give individual population actors awareness of and control over their options, both in individual decisions concerning reproduction and in public policy decisions. With popula-

tion education as a regular part of school curricula, population actors will have a better understanding of the personal and national implications of these options.

By giving individuals the knowledge and the ability to make wise population choices, our basic values are reinforced and the quality of our lives is enriched. And because population issues are so closely intertwined with other important aspects of our society, whatever success we have in solving population problems will make the solution of our other problems that much easier.



# INVOLVEMENT

## OBJECTIVES FOR LEARNING

The role of the teacher or leader in population education is to create conditions so that the students themselves can raise questions, develop hypotheses, and test alternatives on population matters. The teacher's attitude is that of a fellow inquirer who has no final and absolute answers to population questions. The teacher may eventually take a position on a particular issue, but should refrain from doing so in early discussions.

*“There is no way to understand the real options involved in the future unless you become involved in creating them.”*

**Robert Theobald**

## Using Springboards

Most of the activity ideas come in the form of springboards. These are thought-provoking materials on a number of population topics that should motivate students to conduct an inquiry on the subjects. Springboards are ordinarily used in the opening phases of discussion—their main function is to get the participants involved and to generate relevant hypotheses and position statements.

## Using Statements of Learning Objectives

To help the teacher/leader make the most efficient use of the activities, learning objectives are provided. These are written in performance terms (e.g., “identify,” “describe,” “categorize”) so that it is clear what the student is to learn.

Statements of these learning objectives are listed according to three main goals. The specific activities that relate to these objectives are also indicated in parentheses by letter of topic.

**Goal I.** To help students understand how population changes in the United States affect the individual and society.

At the end of instruction the student should be able to:

1. Identify the possible effects of changes in population growth rates on (1) the demand for resources, (2) the demand for social services, (3) environmental stress, and (4) the economic viability of a developed country such as the United States. (E,I,J)
2. Suggest the possible effects of changes in the *distribution* of a population on (1) water, land, and energy resources; (2) social services; (3) age composition (of areas left and entered); and (4) the economy of an area. (C,G,I,L)
3. Identify some of the possible effects of changes in the *composition* of a population on (1) the political system, (2) the economic vitality of an area, (3) social conflict, and (4) social services. (C,F,H,L)

**Goal II.** To help students understand how their own actions can change the size and character of the population of which they are members.

At the end of instruction the student should be able to:

1. Identify and discuss the significant population events in a person's life (e.g., birth, marriage, moving from place to place, bearing children, death). (A)
2. Describe how individual population decisions (such as moving to a new place) influence the individual and family and how the aggregate of individual decisions affects society. (B,D,E,G,I)
3. Categorize the population-relevant events in a person's life into (1) those over which he can have relative control (e.g., marriage, bearing children, moving); and (2) those over which he has little or no control (e.g., his own birth). (A,D,H,J)
4. Suggest various personal actions through which an individual can influence population changes (e.g., by delaying marriage; planning fertility; moving to a city, a suburb, or a new planned community). (D,G,J,K)
5. Suggest various social and political actions through which a person can consciously affect population trends (e.g., by altering immigration laws, planning new growth centers, or supporting or opposing sex education and population education). (D,F,G,H,J,K,L)
6. Identify factors in American society that influence the types of population-related decisions a person makes. For example:
  - Describe how the number and types of roles available to men and women in a society influence population processes.
  - Describe how attitudes toward marriage (e.g., the age at which one should marry) influence population trends. (D,E,J,L)

**Goal III.** To help students develop the knowledge and skills necessary to evaluate the impact of population changes as well as the impact of both personal and public decisions affecting population trends.

At the end of instruction the student should be able to do the following:

*Population Knowledge*

1. Define basic demographic terms such as "cohort" and "age structure" and explain the meaning of terms such as "non-growing population" and "average family size." (B,C,G,K)
2. Read a map, a population pyramid, a table, and a bar or line graph containing population information. (A,B,C,F,G,H,I,L)
3. Assess the importance of births, deaths, and migration on population growth or decline. (B,C,F,G)
4. Define "growth potential" and explain how the following factors influence the rate at which a population is likely to grow: (1) the number of people in, at, or near reproductive age; (2) the age of marriage; and (3) the universality of marriage. (B,C,D,K)
5. Explain how changes in birth rates affect the age of the population. (C)
6. Question the basis of so-called scientifically established fact. (H,K)
7. Distinguish between empirical and value statements. (E,F,H,I,J,L)

*Value Analysis Skills*

8. Identify one's own long- and short-range values and preferences as they relate to population issues. (A,D,F,J,L)
9. Suggest ways of altering existing population trends so that the outcomes are consistent with one's own values and those of society. (D,F,G,J,K,L)
10. Identify the value implications of various policy positions and determine which, if any, are acceptable given one's own values and those of society. (F,G,H,J,L)
11. Generate a set of criteria for selecting among alternative policy choices. (F,G,I,K,L)

*Application Skills: The Commission Report (all topics A-L)*

12. State positions supporting or rejecting the major recommendations of the Commission on Population Growth and the American Future.
13. Identify the values underlying the Commission's recommendations.
14. Analyze the social, political, personal, economic, and ecological implications of the Commission's recommendations.
15. Evaluate the desirability of acting on the Commission's recommendations given one's own values, those of society, and knowledge of population processes.
16. Explain how a group such as the Commission on Population Growth and the American Future deals with ethical issues involving basic personal and societal values.



Drawing taken from  
Robert A. Dentler, *Major  
Social Problems* (Chicago,  
Rand McNally & Company,  
1972), with the permission  
of the publisher.

## ACTIVITIES

Objectives: 1,3 2,8,12

### A. Population Actor: An Autobiographical Approach

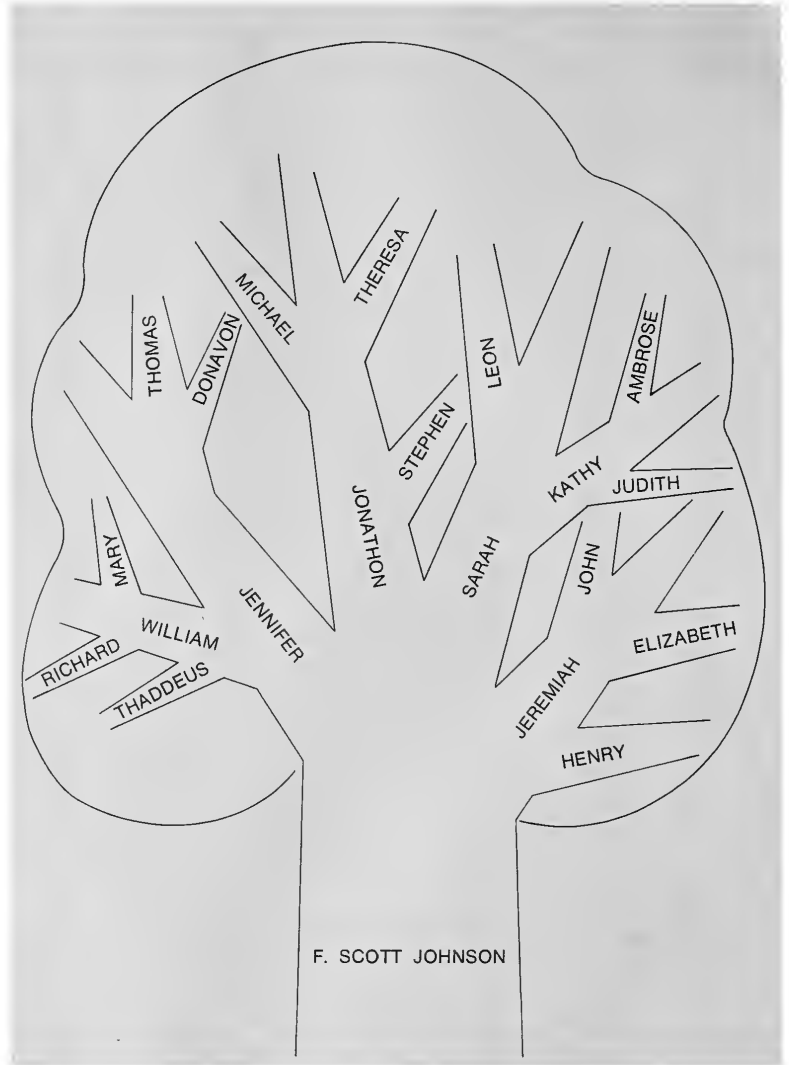
The values and the decisions made by each of us, combined with those of millions of others, produce population trends. Each of us is, therefore, a population actor in an enormous cast.

Read "Each of Us: A Population Actor," on pages 5–8 of this guide. One way to help students discover that they, too, are population actors is through the development of their own autobiographies. Divide this autobiographical exercise into two parts. The first is unstructured, carried out by each student with a minimum amount of guidance to see what he or she already knows about his or her role as a population actor. The second part is a more structured autobiographical form in which questions are designed to reveal the specific decisions and actions of each population actor.

Certain pertinent questions have not been raised because they relate to personal and private matters. For example, questions about sexual experience, abortions, etc., are not included. Yet these matters may be vital concerns of many young people. After the autobiographies are completed, as part of a general discussion, these personal topics may be introduced as issues that confront the entire age group, rather than any particular individual.

As an aid to discussion, an optional tabulation sheet is provided. Use it to discover group characteristics, differences between groups, trends, etc.

## F. SCOTT JOHNSON'S FAMILY TREE



### Autobiography Part I

Persons are born and they die—these two events enclose a lifetime. During this lifetime, all kinds of population events occur. Using your own life, develop an autobiography outlining population events in your life, past, present, and future. For example, the times you moved as a child, plans

you've formulated for your own family, and your occupational prospects might be included. You may wish to think of your lifetime as having three parts: (1) the period between your birth and the present; (2) the period between the present and the near future—the years immediately after you leave school; and (3) the distant future—perhaps beyond age 30, to old age.

## Autobiography Part II

At right is a form for listing important facts that shape the lives of population actors. Some are factors that may only slightly influence your population behavior, while others are the very basis for the decisions that you make. When this list is completed you will be able to chart the determinants and consequences of your own population behavior.

### A. PERSONAL CHARACTERISTICS

Age \_\_\_\_\_ Year of Birth \_\_\_\_\_ Sex \_\_\_\_\_ Race \_\_\_\_\_

Birthplace \_\_\_\_\_ town \_\_\_\_\_ state \_\_\_\_\_ Approx. Size of Birthplace \_\_\_\_\_

Present Residence \_\_\_\_\_ town or city \_\_\_\_\_ Approx. Size of Present Residence \_\_\_\_\_

Life Expectancy \_\_\_\_\_  
(See table on page 28 and select age closest to your own)

Future Occupation \_\_\_\_\_ Intention to Marry \_\_\_\_\_

Expected Number of Children \_\_\_\_\_

In what ways are these facts important to you as a population actor? For example, does your sex or race influence your life expectancy? How else might these facts influence your chances in life? Do you live in the same town in which you were born? Why or why not?

### B. YOUR ANCESTORS

	<i>birthplace</i> (state or country)	<i>present residence</i>	<i>life span</i> (length of life)
1. Grandparents			
mother's mother	_____	_____	_____
mother's father	_____	_____	_____
father's mother	_____	_____	_____
father's father	_____	_____	_____

Does the migration history of your grandparents have any implications for you? For example, if they were born abroad, do you retain any of their ethnic characteristics—language, food, social customs? After coming to the United States did they settle in a rural area or in a city? Are any of them still alive? Do they live with your parents, nearby, or far away? How does this affect the life of you and your family? Fifty years ago, what do you think the family structure might have been? If any of your grandparents are no longer living, how many years did they live? It is likely that you will live longer than they?

2. Parents

	<i>birthplace</i>	<i>age</i>
mother	_____	_____
father	_____	_____

At what age did they marry \_\_\_\_\_ (mother) \_\_\_\_\_ (father)

You are no. \_\_\_\_\_ of \_\_\_\_\_ children.  
(1, 2 etc.)

Migration after marriage

<i>Name of place</i>	<i>rural</i>	<i>urban center</i>	<i>suburb</i>
(1)	_____	_____	_____
(2)	_____	_____	_____
(3)	_____	_____	_____
(4)	_____	_____	_____
(5)	_____	_____	_____
(6)	_____	_____	_____

During what time in American history did your parents marry, e.g. World War II? postwar? How might this influence their decisions on the size of their family? How did the events which occurred during their lifetime (wars, job changes) influence their migration history?

### C. YOUR MIGRATION HISTORY

<i>Name of place</i>	<i>rural</i>	<i>urban center</i>	<i>suburb</i>
(1) _____			
(2) _____			
(3) _____			
(4) _____			
(5) _____			
(6) _____			

What effects, if any, did these moves have upon your life? Do you remember changes in school, changes in friends, and changes in playground and recreational opportunities?

### D. YOUR PRESENT AND THE NEXT FEW YEARS

Do you plan to marry? \_\_\_\_\_ Why? \_\_\_\_\_

If not, what alternative living styles can you think of? \_\_\_\_\_

If so, when do you think you will marry? Age \_\_\_\_\_ Do you think your spouse will be older or younger? \_\_\_\_\_

Would you prefer to marry before or after you complete your education? \_\_\_\_\_ What factors might cause you to alter this plan? \_\_\_\_\_

Do you plan to have children? \_\_\_\_\_ Why? \_\_\_\_\_

\_\_\_\_\_ What factors might cause you to alter this plan? \_\_\_\_\_

At what age would you like to have your first child? \_\_\_\_\_

How long after marriage would this be? \_\_\_\_\_ Why did you decide upon this time? \_\_\_\_\_

How many children do you want? \_\_\_\_\_ Why? \_\_\_\_\_

How many children, more or fewer, do you want than your parents had? \_\_\_\_\_ Why? \_\_\_\_\_

Would you like to space the births of your children? \_\_\_\_\_  
Closely? \_\_\_\_\_ Far apart? \_\_\_\_\_  
Why? \_\_\_\_\_

Would you consider adopting children? \_\_\_\_\_ Under what circumstances? \_\_\_\_\_

Do you see potential role conflicts for yourself in combining marriage, childrearing, education, and a career? \_\_\_\_\_

If so, can you think of ways to resolve these conflicts? \_\_\_\_\_



When you complete school, or if and when you marry, where do you expect to live? \_\_\_\_\_

Is this the same community where you live now? \_\_\_\_\_ If not, why will you move there? \_\_\_\_\_

How would you classify this move? (For example, rural area to city, city to suburb.) \_\_\_\_\_

What will be the consequences for the community in which you live and the one to which you will be going? \_\_\_\_\_

\_\_\_\_\_

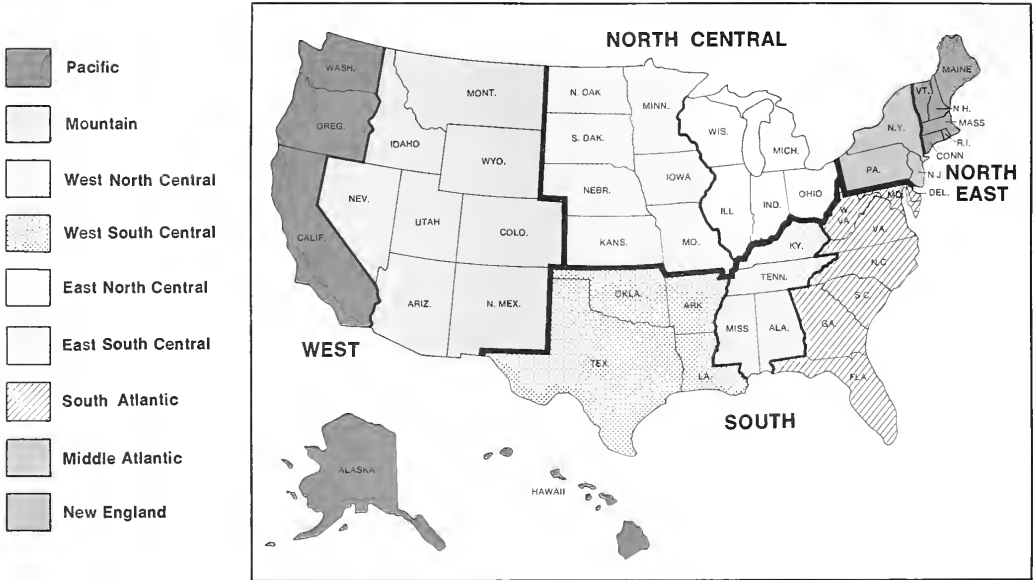
#### E. YOUR FUTURE

What kind of decisions are you making as a population actor? What moves and occupational changes do you anticipate? Where would you like to live when you get older? Do you prefer any particular region? Why? Would you prefer to live in the suburbs, the city, or the country? Why?

If you have children and your youngest child is born when you are \_\_\_\_\_, by your best estimate, you will be \_\_\_\_\_ when this child leaves home for college or his or her own home. This means that you would have \_\_\_\_\_ years at home without children until retirement. What implication does this have for your role as husband or wife?

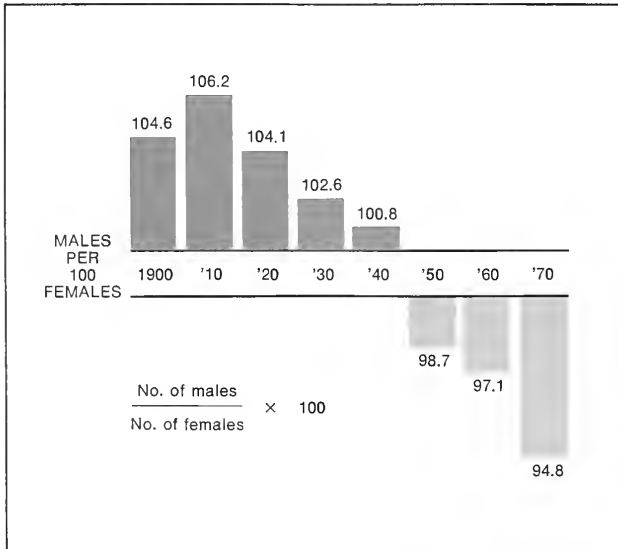
Similarly, at retirement, how many years of life will you have left? (retirement age compared to life expectancy at age 65; see Life Expectancy table on page 28.) How will you plan for these years? How might your life change without employment?

## REGIONS AND GEOGRAPHIC DIVISIONS OF THE UNITED STATES



Source: U.S. Bureau of the Census

### SEX RATIO: 1900 TO 1970



Source: U.S. Bureau of the Census, Census of Population: 1970, *General Population Characteristics*, PC(1)-B1, U.S. Summary (1972).

### LIFE EXPECTANCY BY AGE, COLOR, AND SEX United States 1969

Age	AVERAGE REMAINING YEARS OF LIFE <sup>a</sup>			
	White		All Other <sup>b</sup>	
	Male	Female	Male	Female
At birth	67.8	75.1	60.5	68.4
10	59.6	66.7	53.2	60.8
15	54.7	61.8	48.4	56.0
20	50.1	56.9	43.9	51.2
25	45.6	52.1	39.8	46.5
30	41.0	47.3	35.6	42.0
65	13.0	16.6	12.6	15.7

Source: U.S. Department of Health, Education, and Welfare, National Center for Health Statistics, *Vital Statistics of the United States, 1969*, vol. 2, sec. 5, Life Tables, table 5-4.

<sup>a</sup> Life expectancy by age shows the average remaining lifetime (in years) for a person who has attained a given age. Since persons are eliminated from the life table by death throughout the entire life period, a white male, for example, who actually survives to age 65 has a fairly good chance of living an average of 13 more years.

<sup>b</sup> The "white" and "all other" categories are often based on statistics gathered by a self-enumeration process. It would be misleading to assume that all blacks, Chicanos, and Chinese fall in the "all other" category. Some persons in these groups may consider themselves "white" and have been reported similarly in the data.

### Optional Tabulation of Personal Characteristics

(From Questionnaire on Page 25)

Average age \_\_\_\_\_  
 (Sum of all individual ages divided by number of persons in the group.)

Range of birthplace by size of population:	No.	Percent
Under 2,500 .....	_____	_____
2,500-10,000 .....	_____	_____
10,000-50,000 .....	_____	_____
50,000-100,000 .....	_____	_____
100,000-500,000 .....	_____	_____
Over 500,000 .....	_____	_____

(To obtain percent distribution, divide the number of persons from a particular size birthplace by the total number of persons in the entire group.)

Birthplace by state:

How many different states are represented? \_\_\_\_\_  
 How many different regions or geographic divisions?  
 (See Bureau of the Census map) \_\_\_\_\_  
 How many different countries? \_\_\_\_\_

Present residence:

	No.	Percent
Living in same house as at birth .....	_____	_____
In same town .....	_____	_____
In same state .....	_____	_____
In same country .....	_____	_____

Sex ratio .....

(The sex ratio is the ratio of males to 100 females in a population and is obtained by taking the number of males divided by the number of females and multiply by 100.)

If sex ratio > 100, there is an excess of males.

If sex ratio = 100, the number of males and females is equal.

If sex ratio < 100, there is an excess of females.

Compare the group's sex ratio with those for the United States as a whole from 1900 to 1970 as shown in the figure at left.

Intention to marry:

	No.	Percent
Males intending to marry .....	_____	_____
Females intending to marry .....	_____	_____

Compare the group's results with the following national figures:

95.0 percent of U.S. women aged 50 in 1970 were ever married.<sup>1</sup>

92.4 percent of U.S. men aged 50 in 1970 were ever married.

Average number of births expected:

By all persons in the group .....

By all females in the group .....

By all males in the group .....

(To obtain average, divide the number of births expected by each subgroup by the total number in that subgroup.) Compare the group's results with the following data collected from a national survey on births expected by wives 18 to 24 years of age.<sup>2</sup>

In 1967, average number of births expected ..... 2.9

In 1971, average number of births expected ..... 2.4

In 1972, average number of births expected ..... 2.3

<sup>1</sup> U.S. Bureau of the Census, *Statistical Abstract of the United States: 1971* (1971). "Ever married" is a demographic term referring to those persons who are presently married, widowed or divorced.

<sup>2</sup> U.S. Bureau of the Census, "Birth Expectations and Fertility: June, 1972," *Current Population Reports* (September 1972).

## B. POPULATION GROWTH

Population grows when the number of people born each year plus those who immigrate to a country exceeds the number who die plus those who leave.

The rapid growth in the world's population as a whole is a recent development in man's history. Until the industrial revolution was well on its way, birth rates around the world were high, but hunger and disease stacked the odds against infants surviving to the age of parenthood. Societies required high birth rates simply to maintain their numbers.

With the introduction of modern health measures, death rates have dropped dramatically while birth rates in most of the world remain high, resulting in rapid population growth. In the Western world improved sanitation, medical care, and economic conditions were accompanied by the widespread use of contraceptive methods, which together brought about a new pattern of low death rates and low birth rates. This important change, known as the demographic transition, took about a century and a half in the industrialized nations, but it has not yet occurred in the developing nations.

Since World War II drastic reductions in mortality in developing nations have not been matched by equal reductions in the number of births. Instead of narrowing, the gap between birth rates and death rates has widened in these countries, the rate of natural increase has risen steeply, and world population growth consequently has accelerated.

The world's population grew from one-half billion around 1650, to about 2.5 billion in 1950, and has already grown beyond 3.5 billion in 1970. If current rates continue for another 50 years, the world's population will reach 10 billion.

Although the United States has always been a nation of growing population, the rate of growth has declined considerably during the twentieth century. Substantial changes have occurred in all three components of population growth—fertility, mortality, and migration. At the beginning of this century, the birth rate was about 32 births per 1,000 population and declined to about 18 per 1,000 during the Depression. After World War II, the birth rate shot up to a high of 27 per 1,000 and remained almost as high for a decade giving us the "baby-boom" era. By the early 1960s, the boom had run its course, and our birth rate today is below pre-World War II levels.

Our society's ability to preserve and extend life has caused the death rate to fall from 17 per 1,000 persons in the year 1900 to about 9 per 1,000 today. Furthermore, the average life expectancy of Americans has increased 23 years since 1900, giving us an average life span of 70 years.

Immigration is also a major determinant of the growth rate. During the first decade of the 20th century, almost 40 percent of U.S. population growth was due to immigration. During the 1930s the number of immigrants was actually lower than the number of people leaving the country. Immigration once again increased following World War II, and during the 1960s it accounted for about 16 percent of our national growth.

While the proportion of our population that is foreign-born is not changing much, the relative importance of immigration as a component

### DEMOGRAPHIC PERSPECTIVE OF 20TH CENTURY UNITED STATES

	1900	1970
Population	76 million	205 million
Life expectancy	47 years	70 years
Median age	23 years	28 years
Births per 1,000 population	32	18
Deaths per 1,000 population	17	9
Immigrants per 1,000 population	8	2
Annual growth	1¾ million	2¼ million
Growth rate	2.3 percent	1.1 percent

Sources: U.S. Bureau of the Census, *Historical Statistics of the United States, Colonial Times to 1957* (1961); U.S. Department of Health, Education, and Welfare, National Center for Health Statistics, *Vital Statistics of the United States, 1968*, vol. 2, sec. 5, Life Tables; and Irene B. Taeuber, "Growth of the Population of the United States in the Twentieth Century" (prepared for the Commission on Population and the American Future, 1972).

of population growth has increased as the birth rate has declined.

These changes in fertility, mortality, and migration have produced a long history of diminishing growth rates. The annual rate of growth has dropped from about 3.3 percent during the 1820s to a low of around 0.7 percent during the Depression. After a rise stimulated by the baby-boom era, the present rate of growth has leveled at about 1.0 percent. Today, however, the size of the population is so large that even the low current rate of growth produces an additional 2½ million people each year.

## Activity #1

### Doubling Lily Pads

The riddle below serves as a springboard for discussing the doubling of the population. Students should be given the riddle and a few minutes to figure it out. Each student should be encouraged to arrive at his or her own answer before comparisons are made. If the class is slow, the teacher might want to have the students work in groups of two or three to solve the riddle.

*Suppose you own a pond on which a water lily is growing. The lily plant doubles in size every day. If the lily were allowed to grow unchecked, it would completely cover the pond in 30 days, choking off the other forms of life in the water. For a long time the lily plant seems small, and so you decide not to worry about cutting it back until it covers half the pond. On what day will that be?*

—Donella H. Meadows, et al.,  
*The Limits to Growth*  
 (New York: Universe Books,  
 1972), p. 29.

At first, some students may guess that the pond will be covered on the fifteenth day, others on the twenty-ninth day. It may be surprising to the students to find out that the pond will be only half-covered on the twenty-ninth day, and completely covered one day later. The students should discuss why everyone did (or did not) agree that the lily pad would cover half the pond on the 29th day.

The birth rate measures the number of babies born in one year for each 1,000 persons in the population at the midpoint of that same year:

$$\text{BIRTH RATE} = \frac{\text{NUMBER OF BIRTHS PER YEAR}}{\text{POPULATION}} \times 1,000$$

Similarly, the death rate is the number of deaths in one year per 1,000 population:

$$\text{DEATH RATE} = \frac{\text{NUMBER OF DEATHS PER YEAR}}{\text{POPULATION}} \times 1,000$$

Net migration is the difference between the number of people who enter the country in one year (immigration) and the number who leave (emigration):

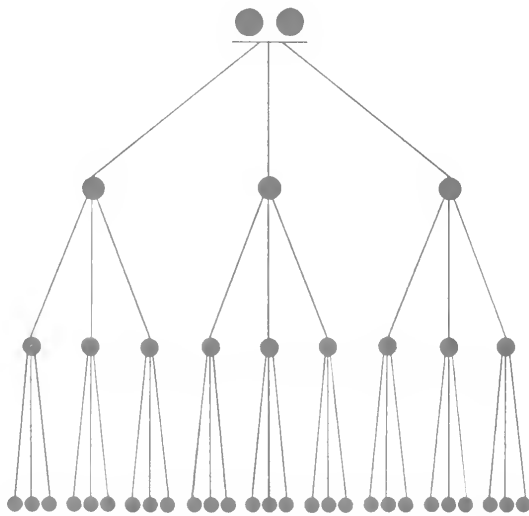
$$\text{NET MIGRATION} = \text{IMMIGRATION} - \text{EMIGRATION}$$

Net migration can be converted to a "per-1,000" figure and added into the equation to yield the growth rate:

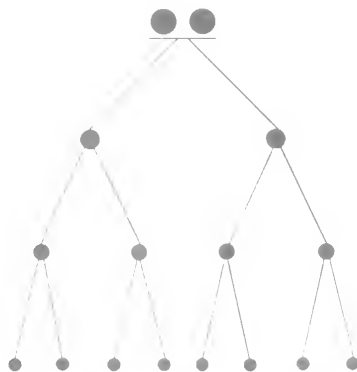
$$\text{GROWTH RATE} = \frac{\left[ \frac{\text{BIRTH RATE} - \text{DEATH RATE}}{10} \right] + \frac{\text{NET MIGRATION}}{\text{POPULATION}} \times 1,000}{10}$$

Doubling time is the number of years needed to double the original population size, depending on a country's rate of population growth, e.g.:

<i>growth rate</i>	<i>doubling time</i>
1%	70 years
2%	35 years
3%	23 years



3 people—1 generation  
 9 people—2 generations  
 27 people—3 generations  
 39 people total



2 people—1 generation  
 4 people—2 generations  
 8 people—3 generations  
 16 people total

## Activity #2

The following activity begins to explain the difference in future population growth resulting from an average family size of two children and one of three children. A skein of brightly colored yarn is needed for this activity. The chairs in the room should be pushed against the walls so that a large, open space is available. The activity works best in large groups (50 or more), although it can be used in smaller classes as well.

Two students are selected to be a "mother and father." This couple is given three pieces of yarn to indicate that they will have three children. They select three students in the group to represent their own family of three children. Each of these persons is then given three pieces of yarn and selects three students to represent his or her children. Again the new "parent" is connected to the children with yarn (see diagram at left). The process continues until all of the students are selected.

After doing the exercise, the students should diagram the activity. They may want to carry the diagram farther on paper than was possible in class (e.g., four, five, or six generations). The teacher might ask: "How many people have been born into this world after two generations? after three? four? six? ten?"

After a brief discussion, the yarn activity should be repeated with one modification. The couples should decide to have two children. Then a second chart should be drawn. Students should spend the rest of the period analyzing the data in the charts and making comparisons between them. Various hypotheses and generalizations can be drawn from the data [i.e., if the number of children per family is reduced to two, instead of three, then the number of years it takes for the population to double should increase).

### Important Note

The preceding activity oversimplifies reality. In group discussion, be sure to account for the following:

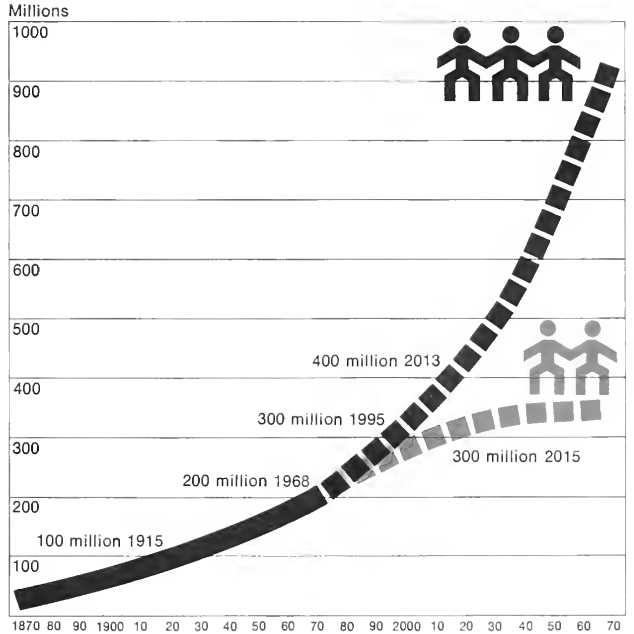
1. There will always be a range of family size in society. Some people won't marry. Some couples will choose to have no children, while others may have one, two, three or more children.
2. For the sake of simple example, the activity only follows one family line. Note, however, that the rate of growth indicated in both the 2-child and 3-child exercises is overstated because offspring are shown in proportion to one parent only.
3. Deaths are not figured into this exercise. Students are learning about the number of people born into a hypothetical world, not the number of people existing in it.
4. The length of generations varies. To illustrate this, the length of yarn pieces may be varied.

### Activity #3

Reproduce and distribute the full page graph on page 15 of this guide. Develop discussion around the following questions:

1. According to the graph what was the population of the United States in 1968? What will it be in 1995?
2. In which year did (will) the U.S. reach a population of 100 million? 200 million? 300 million?
3. What will determine whether the population is greater or less than 300 million in 2010?

U.S. Population: 2- vs. 3-Child Family



Source: Commission Report, p. 23.  
Note: Assuming small future reductions in mortality and future immigration at present levels.

Objectives: 2,3 1,2,3,4,5,12

## C. AGE STRUCTURE

Because of a history of relatively high birth rates in the United States, for a long period our population was considered "young" compared with that of European countries. In the past century, however, our population has been growing "older" due to the long-term downward trend of the birth rate.

This trend was interrupted by the postwar baby boom which has significantly affected the nation's age structure (the proportion of persons at each age). Members of the baby boom generation are now moving into adulthood and in the twenty-first century will join the ranks of older citizens.

One way to study age structure is through the use of age pyramids. An age pyramid provides a visual image of the age structure of a society. The vertical axis shows different age groups. The horizontal axis shows the number of people in each age group. What causes changes in the age structure? High birth rates, as mentioned above, produce large numbers of children and give the pyramid a larger base. On the other hand, low or falling birth rates produce a smaller proportion of children in the total population and give the pyramid a narrower base.

Death rates also change the shape of the pyramid. As death rates rise for any particular age group, e.g., young men in time of war, the band representing that age group would be smaller. If fewer infants and children die and if people in general live longer, we say the survival rate is increasing. Changing survival rates will affect the shape of the pyramid at several ages. For example, if infants survive to the reproductive age, the children they bear will increase the base of the pyramid.

Migration is the fourth major factor that affects age structure. When people of a particular age group leave the country, they change the age structure of the area they are leaving as well as that of the region to which they are moving.

A general distinction is often made between the age structure of indus-

trialized and less developed countries. An age pyramid with a broad base that narrows rapidly toward the top is typical of a less developed society with high birth and death rates. An age pyramid that is fairly evenly distributed from bottom to top is typical of a more industrialized society with low birth and death rates.

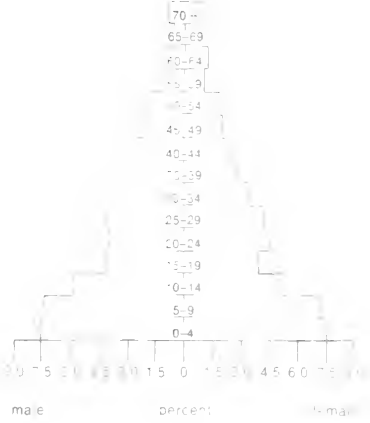
### Activity #1

The following three age pyramids could be used to introduce the idea of age structure. They should be introduced to students without revealing the names of the countries. For teacher reference: a = India; b = United States; and c = Costa Rica.

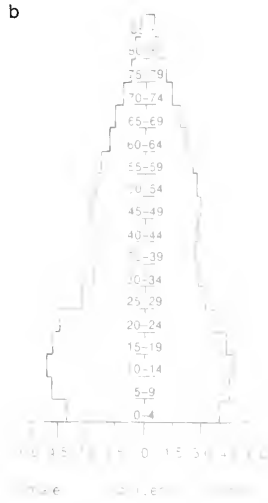


# POPULATION PYRAMIDS FOR SELECTED NATIONS

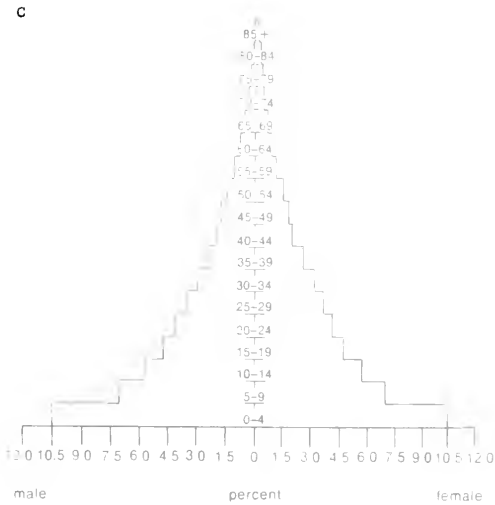
a



b



c

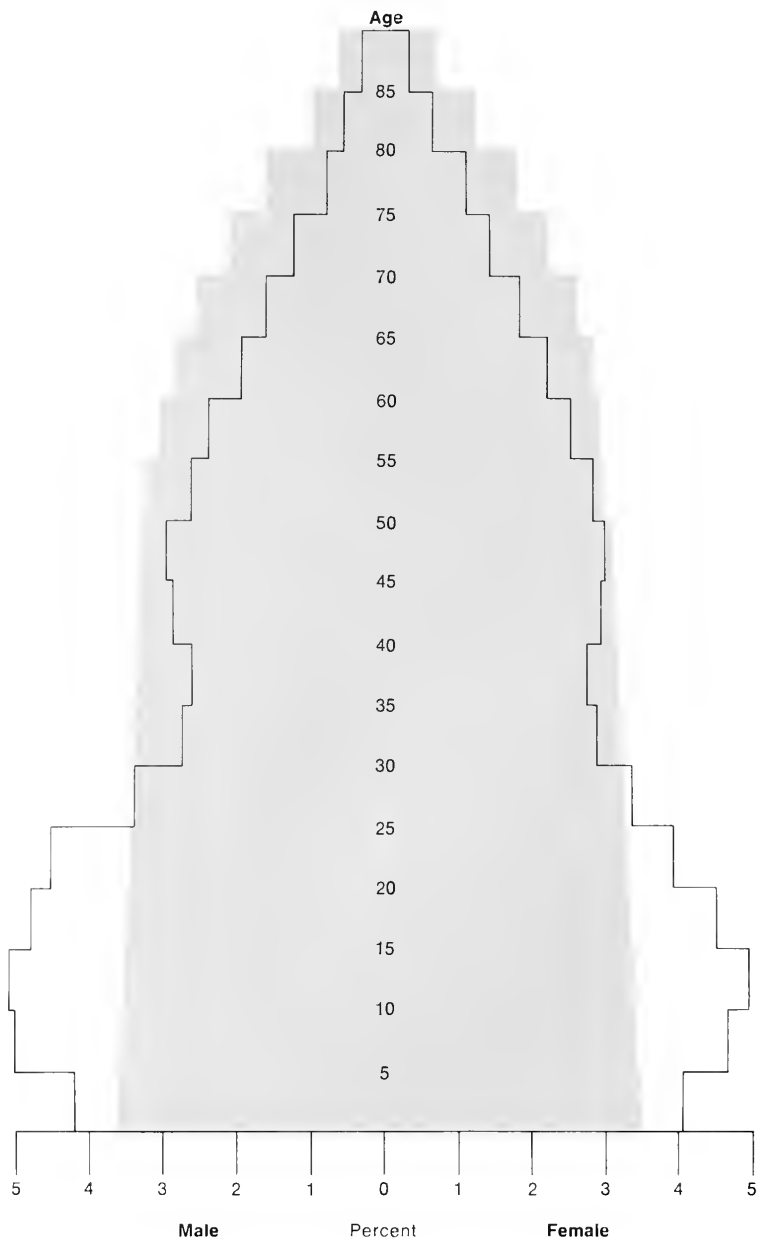


## Questions:

1. How are the three figures similar? How are they different?
2. What factors may account for the differences?
3. What kind of country (industrialized/ agricultural) do you think each of these charts represents? Why?

Source: Donald J. Bogue, *Principles of Demography* (John Wiley, 1967), p. 151.

**U.S. AGE DISTRIBUTION: GROWING (1970) VS. NON-GROWING**



**Questions:**

1. Which pyramid reflects a non-growing or stationary population? How do you know?
2. What are the main differences between a non-growing and a growing population?
3. Which has a larger proportion of old people? young people?

Source: Ansley Coale, "Alternative Paths to a Stationary Population" (prepared for the Commission on Population Growth and the American Future, 1972).

## Activity #2

With a 2-child rate of growth in the United States for the rest of this century, the age structure would show a consistent pattern of becoming older; with the 3-child rate, the age structure would become slightly younger. The structure that would result from indefinite persistence of a 2-child average—a non-growing or stationary population—would have a median age of 37. In such a population, the number and percentage of persons in each group would be roughly the same from birth to age 50 or 60; there would be nearly as many 50-year-olds as five-year-olds. Above age 60, the numbers would taper off rapidly because of the high death rates at the older ages.

What are some of the implications of an older population? Of course, how we even define “old” and “young” is a matter often determined by the customs in a particular region or country. For example, in a population characterized by long life, health and vitality can be retained to older ages. Sweden, with an older population than ours, places retirement at age 70 rather than 65, while India, with a much younger age structure, places it at 55.

Not only does the changing age structure of a population influence the nature of the labor force, it also has implications for political and social change. For example, an older population might be expected to display a greater attachment to the status quo. Provision of adequate health services to senior citizens might require an increasing proportion of financial resources at federal, state, and local levels.

If students have become familiar with age pyramids and the meaning of age structure, the teacher should hand out the chart at left that shows what the age structure of the United States would be like if the average family size were two children and if it were three children.

## D. PRESSURES TOWARD MARRIAGE AND CHILDBEARING

Until modern times, high rates of reproduction were necessary to offset high mortality—especially infant mortality. In agricultural societies children were assets in the home- and farm-centered economy. Also, before care of the aged became institutionalized, parents had to rely upon their children for care in their old age. Large numbers of children were advantageous. As a result of these factors and of short life expectancy, American women spent most of their adult lives bearing and rearing four or five children.

Long before the tradition of the large family disappeared, some couples had begun to adopt the small family pattern. As a result of declining mortality rates, a diminishing need for child labor in agriculture, increasing costs of raising a child in an industrialized urban society, and improved methods of fertility control, both the number of children desired and born declined.

Despite this trend, pronatalist pressures (those favoring childbearing) still exist. These include (1) the shaping of the young into sex-typed roles, with the boys pointed toward jobs and the girls toward home and motherhood; (2) discrimination against the working woman and especially against the working mother; and (3) restrictions on higher education for women. Such forces are so pervasive that they are typically perceived as natural forces and not simply as cultural prescriptions.

### Activity #1

#### Survey

As a way of illustrating these factors, a simple survey activity is suggested for use before classroom discussion. Use the questionnaire on page 39 to measure the attitudes of your students.

In tabulating the results, look for the following patterns: Most persons

will probably indicate plans for marriage and childbearing that are quite similar—revealing conditioning by cultural and social forces. Note those who do not expect the female to work after marriage: are there differences in male and female responses? Do the answers to the questions on number of children expected and number desired differ? If the same, mention the Commission's finding that 44 percent of all births from 1966 to 1970 were reported as unplanned and 15 percent as unwanted.

The questions on attitudes may suggest biases against nonmarriage and childless marriages as well as expectations that women will fit into the role of wife-homemaker-mother. Look for answers to question 15. If in agreement, the class does not reflect the Commission's recommendation for less regimented reproductive behavior. Such a recommendation was based on evidence that a non-growing population could be reached if, on the average, families had two children. This is not recommended as a standard for all to achieve.

In light of the results of the survey and after participants have had a chance to analyze and discuss their own attitudes, offer the following statement from the Commission for further comparison:

*The objective for American society should be to make the childbearing decision as free as possible of unintended societal pressures: It should not be to "force" people to become parents in order to seem "normal," but to recognize that some people, and perhaps many, are not really suited to parenthood. We should strive for the ideal of diversity in which it would be equally honorable to marry or not, to be childless or not, to have one child or two or, for that matter, more. Our goal is one of less regimentation, not more.<sup>1</sup>*

<sup>1</sup> Commission Report, p. 91.

**SURVEY: MARRIAGE AND CHILDBEARING**

- 1. Female\_\_\_\_\_ Male\_\_\_\_\_
- 2. Do you plan to marry? Yes\_\_\_\_\_ No\_\_\_\_\_
- 3. If yes, at what age do you plan to marry? Age\_\_\_\_\_
- 4. If female and you plan to marry, do you plan to work after marriage? Yes\_\_\_\_\_ No\_\_\_\_\_
- 5. If male and you plan to marry, would you like your wife to work after marriage? Yes\_\_\_\_\_ No\_\_\_\_\_
- 6. If female how long will you work?  
If male, how long should your wife work after marriage? Years\_\_\_\_\_
- 7. If you plan to have children, at what age would you expect to have your first child? Age\_\_\_\_\_
- 8. How many children do you want to have? No.\_\_\_\_\_
- 9. How many children do you expect to have? No.\_\_\_\_\_
- 10. At what age would you expect to complete your childbearing? Age\_\_\_\_\_

*Do you agree or disagree with the following statements:*      Agree      Disagree

- 11. Part of the fulfillment of everyone's life is in marriage. \_\_\_\_\_
- 12. Part of the fulfillment of everyone's life is in having children. \_\_\_\_\_
- 13. A childless or a single-child family may have as fulfilling experiences as other families. \_\_\_\_\_
- 14. If a couple has the number of children they want, but all are of one sex, they should keep trying for a baby of the other sex. \_\_\_\_\_
- 15. All American couples should have two children in the interests of stopping population growth. \_\_\_\_\_
- 16. Woman's place is in the home. \_\_\_\_\_
- 17. After marriage and childrearing, women should continue working. \_\_\_\_\_
- 18. Because most women marry and leave work when children are born, minor forms of job and pay discrimination must be expected. \_\_\_\_\_
- 19. Unmarried women who are in their 40's and 50's are lonelier than unmarried men of the same age. \_\_\_\_\_

## Activity #2

### Case Study: Are Boys Better?

Paul and Freda Wilson are a young married couple in their early twenties. They have two little girls aged four and six. They have read in news magazines that if the present world population growth of 2 percent continues for another 650 years, there will be one person for every square foot of surface on the entire earth. Paul and Freda have always supported the "zero population growth" idea. They also realize that to reach zero population growth families, on the average, would have two children.

Paul and Freda also want a son to carry on the "Wilson tradition" on the football field at Calumet College in a nearby town where Paul and his father were star halfbacks in their college days.

#### Questions:

1. Why do you think Paul and Freda want a son so badly?
2. Do you think it really matters what they decide? Why or why not?
3. What do they need to consider in making their decision?
4. Can you think of one sure way of having a boy in the family without Freda bearing another baby?
5. What do you think Paul and Freda should do? Why?

Photo by Ken Heyman



### Activity #3

As a follow up to activities 1 and 2, raise the question as to where and how we pick up certain ideas and develop attitudes on reproduction, family structure, and sex roles. In discussion, consider the attitudes of parents, teachers, other leaders, and the mass media.

As a term paper or project, students might investigate the following topics:

- Images of family life and women's roles projected on television.
- Themes on childbearing and rearing in women's magazines.

Point out that we don't yet know for sure what actual influence these images and themes have on our behavior. In addition, alert students to the possibility that some of these themes have already changed.

As a stimulus to such a project, offer the following excerpts from " 'I Have 7 Children,' She Said to Wild Applause."

### 'I Have 7 Children,' She Said to Wild Applause

By Ellen Peck

Susan, on "As the World Turns," has just had a baby. She is not the only one. Turning the daytime dial, we see that Chris, on "Where the Heart Is," has just had a baby, too. Within the past year, babies have also been born to Janet on "Search for Tomorrow," Meredith on "One Life to Live," Edie on "All My Children," Angel on "Love Is a Many-Splendored Thing," Diana on "General Hospital," Linda on "Days of Our Lives," Mary on "Where the Heart Is," Carolee on "The Doctors" . . . and "Another World's" Pat Randolph has twins.

Actually, the birth rate on daytime TV seems to rival that of Latin America!

If the pregnancies per se are demographically questionable, the way in which they are presented is often psychologically alarming: pregnancy is shown as woman's way to become the center of attention, retreat from unresolved conflicts, or compete for men.

A classic natalist competition took place recently on "As the World Turns." Susan is married to Dan, who is in love with Liz (and is, in fact, the father of Liz's child). Sensing her husband's attraction to Liz, Susan became pregnant, hoping thus to win Dan's permanent affection.

That pregnancy was planned—at least by Susan—and such planning is rare on the daytime dramas. Most pregnancies are accidental. . . .

Actually, were all pronatalist, glory-of-motherhood-and-reproductive-function comments to be combined and presented to the F.C.C. Fairness Doctrine Committee, daytime TV would owe Planned Parenthood, Zero Population Growth and the National Organization for Non-Parents approximately 18,200 minutes of "equal time" for the past year's shows alone. . . .

Strong impressions are conveyed here: pregnancy will save your marriage; motherhood will fulfill you; bearing a man's child will make you supremely important to that man. Such messages are misleading (the "baby holds man" myth is dispelled by a simple glance at the divorce statistics); nevertheless, 12 of the 16 daytime dramas carry strong reproductive themes.

Daytime quiz and talk shows offer scant relief. Recently on "The Dating Game" a contest question was, "How many children do you want?" (Responses were "three," "three," and "five.") That same week, Garry Moore asked a "To Tell the Truth" contestant, "And what do you do?" She replied, "I'm a housewife and mother of seven children," and the audience applauded mightily. . . .

An episode of last season's "Dick Van Dyke" series also deserves examination. It was called "Off and Running"; I call it "I Didn't Mean Us."

Situation: Dick hosts his own talk show. After interviewing an author and commending a book, "Overpopulation Begins at Home," Dick returns to his own home to learn that another child is on the way. He and Jenny already have a 16-year-old son and a 9-year-old daughter. Sample dialogue:

JENNY: You've always been so outspoken about the dangers of overpopulation and how responsible couples should replace only their own number . . .

DICK: Honey . . .

JENNY: Didn't you mean what you were saying?

DICK: Yes, but . . . I didn't mean us. . . .

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## E. THE ECONOMY: A MYSTIQUE OF GROWTH

In considering the relationship between the economy and population growth, the Commission made the following statement:

*We have looked for, and have not found, any convincing economic argument for continued national population growth. The health of our economy does not depend on it. The vitality of business does not depend on it. The welfare of the average person certainly does not depend on it.*<sup>1</sup>

### Activity #1

#### "Where Do The Children Play?"

The popular song writer, Cat Stevens, and members of the Commission on Population Growth and the American Future share a common concern: availability of recreation space.

More and more American families have the time, the money, and the inclination to enjoy the outdoors. With better roads and easier travel, national parks have in effect become city parks for the residents of nearby urban areas. The Commission's research revealed that in the past 10 years, visitors to all national parks more than doubled, while the area of the parks increased by only 20 percent. There are still many areas to enjoy and more to be developed, but the enjoyment will depend largely on how fast the population grows.

The song (right) is one written by Cat Stevens in 1970. Listen to "Where Do The Children Play?" The song describes the "progress of mankind." It shows a difference, however, between "progress" that increases the quality of our children's lives and "progress" that may threaten it.

Use this song as a springboard for discussing the complexity of the concept of "progress" as well as for discussing the implications of population and economic growth. Encourage students to explore the different implications for developing countries in contrast to industrialized nations.



<sup>1</sup> Commission Report, p. 41.





## WHERE DO THE CHILDREN PLAY?

*Well I think it's fine building Jumbo planes, or taking a ride on a cosmic train, switch on summer from a slot machine, yes get what you want to, if you want, 'cause you can get anything. I know we've come a long way, we're changing day to day, but tell me, where d' th' ch'ldr'n play.*

*Well you roll on roads over fresh green grass, for your lorry loads pumping petrol gas, and you make them long and you make them tough, but they just go on and on, and it seems that you can't get off. Oh, I know we've come a long way, we're changing day to day, but tell me where d' th' ch'ldr'n play.*

*Well you've cracked the sky, scrapers fill the air, but will you keep on building higher 'till there's no more room up there. Will you make us laugh, will you make us cry, will you tell us when to live, will you tell us when to die? I know we've come a long way, we're changing day to day. But tell me, where d' th' ch'ldr'n play.*

—Cat Stevens, "Where Do The Children Play?" from the album, *Tea for the Tillerman*, A&M Record Company, Hollywood, Cal. © 1970 Freshwater Music Ltd. (England). Controlled in the Western Hemisphere by Irving Music Inc. (BMI) All Rights Reserved.

## Questions:

1. What is this song all about?

2. How does the author feel about the subject of this song? What words or phrases in the song make you think he feels this way?

3. Do you agree with Cat Stevens? Why or why not? Do you think what he says applies to your community?

4. One line says: yes get what you want to, if you want, 'cause you can get anything? What does the author mean? Do you think this phrase will be true as the population continues to grow?

5. Why do you suppose the author keeps repeating the title of the song after each verse? Why does he stress the urgency of acting now?

6. Playgrounds are just one example of things of value for our children that we may be losing. What are others? Discuss possible solutions or policies that might help us maintain those things we value.

Photo by Craig Fisher  
(Scene from the film  
*Population and the  
American Future*)

## Activity #2

For many years the concept of economic growth has been freely accepted by government, labor, business, and Chambers of Commerce. There has been an attempt to equate quantity with *quality of life*. Consequently,

many cities are suffering from years of unplanned growth. The ad on page 44 could be used as a springboard for discussing the problems that may result from rapid and unplanned growth. Reproduce and distribute the ad, or ask students to find others in local newspapers or magazines.

# From Every Part Of The Country People Are Coming to Moplin

A year of progress and the forecast of greater improvement are yours in Moplin. For manpower, raw materials and transportation, Moplin has been the state's leading growth center during the last decade. The city's output has doubled in the last year alone.

We can offer you both financial assistance and tax benefits on your investments in new or increased production facilities especially those oriented to research. Both private and public funds are available for up to 100% financing on new construction, in some cases. In addition, the city offers special business tax credits for new operations in low-income sections of the city.

More and more companies such as Kellogg, Xerox, GM, U.S. Steel, Ralston Purina, and Reynolds Metal are choosing Moplin as the site for their regional center. They have found what they were looking for and you can too.

For more information, complete the attached form and mail today.

Commissioner H. T. Waxen  
Moplin Dept of Commerce 2-B First Street  
Moplin, O.K. 122987

Please send more information on industrial location in Moplin.

NAME \_\_\_\_\_  
TITLE \_\_\_\_\_  
FIRM \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

### Questions:

1. What do you think the purpose of this ad is?
2. Do any of the words or phrases relate to population growth? population distribution? Underline those that do.
3. What does the phrase "growth for growth's sake" mean to you?
4. Do you think that restrictions should be placed on future economic growth? Why or why not?

### Activity #3

Many business and civic leaders believe that "growth is good," and "more is better." To gather first-hand evidence of these attitudes, have students interview community leaders, using the questionnaire below. If each student interviews two or three community leaders, the combined results should be suggestive enough to reveal these attitudes.

When students have collected this information, the answers should be tabulated and analyzed. Code the results by computing percentages for both "yes" and "no" responses. It is important to point out that this is not a large enough sample for proper statistical analysis; this simple exercise will yield impressions only. But they are impressions gained from leaders of the community who are influential in shaping attitudes towards community as well as national growth.

#### SAMPLE QUESTIONS

1. The recent report on Population Growth and the American Future suggests that national population growth should be slowed. Do you agree with that recommendation?

Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Do you think that a slower rate of national population growth will hurt the nation's business and economic activity?

Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. With respect to your own job or business \_\_\_\_\_  
(identify)  
would a slower rate of national population growth hurt your activity?

Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. How do you feel about the future growth of your community? Do you think that the population of your community should stay at its present size?

Why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

#### Sample Respondents:

- Chamber of Commerce officials
- local department store managers
- real estate agents
- retail store owners
- civic club leaders (Rotary, Lions Clubs, etc.)
- government officials
- stock brokers
- manufacturing plant management

## F. IMMIGRATION

Historically, immigration has contributed significantly to the growth and development of the United States. Immigrants now enter this country at a rate of about 400,000 per year. The relative importance of immigration as a component of population growth has increased greatly in the past decade as declining birth rates diminish the level of natural increase.

If immigration were to remain at 400,000 per year and all families were to have an average of two children, then immigrants arriving between 1970 and 2000, plus their descendants, would account for almost a quarter of the total population increase for that period. Once zero growth was reached, the size of the population would ultimately be about 8 percent larger than if there were no international migration.

Immigration affects not only the growth of the population, but also its distribution. Immigrants tend to settle in the largest cities. Assuming the

2-child growth rate immigrants will contribute about 23 percent of the projected population growth within fixed metropolitan boundaries between 1970 and 2000.

Under the U.S. Immigration and Naturalization Act of 1965, "preference" categories were established for classifying applicants for immigration. Applicants are classified according to relationships with persons in the U.S. or job skills. Preference categories include:

1. Unmarried sons or daughters of U.S. citizens
2. Spouses of resident aliens
3. People with certain professions or skills
4. Married sons and daughters of U.S. citizens
5. Brothers and sisters of U.S. citizens
6. Workers in certain categories that are in short supply in the United States
7. Refugees

Spouses and children of preference applicants are entitled to the same preference if accompanying or following such persons.

### Activity #1

Reproduce Tables 1 and 2 for group discussion. Table 1 compares immigration from various world regions for the years 1960, 1965, and 1970. Ask students to interpret what was happening to American immigration between 1960 and 1970. Note the dramatic shifts in the pattern of immigration. What groups are declining in number? What groups are increasing? Why? Discuss these shifts as a consequence of the 1965 Immigration Law that established preference categories.

Table 2 offers figures on illegal immigration in 1970. It is impossible to estimate precisely how many escape detection. Estimates of the number of illegal aliens currently in the United States run between 1 and 2 million.

Ask students to determine from the table which category of aliens required to leave the country is the largest? What is the most likely reason for these persons entering the United States? The reason for their deportation?

**Table 1. U.S. IMMIGRANTS, BY REGION OF BIRTH, 1960-1970**

	1960	1965	1970
All Countries	265,398	296,697	373,326
Europe	139,670	114,329	118,106
Asia	24,071	19,778	92,816
North America	85,075	126,729	129,114
South America	13,048	30,962	21,973
Africa	2,319	3,383	8,115
Australia and New Zealand	912	1,066	2,280
Other Countries	303	450	922

Source: U.S. Bureau of the Census, *Statistical Abstract of the United States 1971* (1971), chart 133, p. 9.

**Table 2. DEPORTABLE ALIENS APPREHENDED DURING 1970-71 AND THEIR DISPOSITION**

Type of Aliens	Number	Percent of Total
Entered illegally	244,492	71
Entered legally, subsequently violated status	100,861	29
Immigrants	2,670	
Visitors	64,163	
Students	5,238	
Crewmen	15,381	
Temporary agricultural workers	639	
Other	12,770	
Total	345,353	100
Aliens deported	16,893	5
Aliens required to depart	303,348	95
Crewmen	11,957	
Direct required departures under safeguard, mainly Mexicans entering without inspection	239,810	
Other	51,581	
Total	320,241	100

Source: U.S. Dept. of Justice, *1970 Annual Report of the Immigration and Naturalization Service* (1971), pp. 12, 22, 87.

## Activity #2

Ask students to simulate a hearing of the Senate Subcommittee on Immigration and Naturalization on Senate Bill 0000 that would establish a worldwide ceiling of 200,000 immigrants to the United States annually. Assign students to roles of Senate Subcommittee members and representatives of interest groups. Use the positions of the following interest groups:

**Federal and State Labor Departments.** Some of the serious economic and social problems in the United States may be traced to legal immigration. We must ensure that immigrants do not compete with indigenous labor, particularly in times and places of severe unemployment. Since immigrants often have relatively high education and skills, there is incentive for employers and institutions to favor them. This obviously works to the disadvantage particularly of minority groups and women, who have traditionally been discriminated against.

Our present flow of immigrants can hide the need for developing domestic talents. Without the availability of foreign-trained doctors, for example, our own medical schools would have to provide training opportunities for more Americans—particularly minorities and women.

**Political Refugees.** The United States prides itself on being a nation open to the politically oppressed people of the world. Because refugee situations cannot be anticipated, flexibility is the most important factor in immigration policy. We could not have anticipated the flow of anti-Castro Cuban refugees, for example. The Cuban Airlift since 1965 has brought almost 200,000 Cubans to our land. And according to *The New York Times* entry into the United States is being sought for 20,000 Cubans presently exiled in Spain.<sup>1</sup> How can we turn our backs on these people by imposing stricter quota systems? We must have unrestricted entry for persons fleeing from any country for reasons of race, religion, nationality, or political opinion.

**No-Growth Supporters.** If we agree that it is important to reach a non-growing population by voluntary means in the United States, then it is time for a critical reevaluation of our immigration policy. Since American families reached a replacement level of fertility in 1972, immigration now accounts for anywhere from 20 percent to 35 percent [legal and illegal immigrants] of our annual population increase.

While we speak of the right to a chance for self-betterment and America's responsibility to extend this opportunity to others outside our borders, we must weigh this against the right of each U.S. citizen to a high quality of life and the duty of U.S. governmental policy to protect this right.

**International Community.** Our humanitarian responsibilities to the international community require consideration of matters beyond national demographic questions. To think of what's beneficial for only those legally residing within our own national borders is shortsighted.

Moreover, our nation's history repeatedly reveals the outstanding contributions of immigrants. They have left an indelible mark on American industrial development, art, and scholarship. Immigrants today are contributing in equally significant ways, and we all benefit from the diversity of race, religion, and nationality brought into our evolving American culture.

**Farm Workers and Unions.** Estimates place the number of illegal aliens currently in the United States between 1 and 2 million. Most are men seeking employment and about eight out of ten illegal aliens found are Mexicans. The influx of illegal aliens across the Mexican border has increased the difficulty of organizing labor in this region. These workers cannot risk discovery of their unlawful status by complaining or organizing. They not only deprive citizens and permanent resident aliens of jobs, but also depress the level of wages and working conditions in areas where they settle.

For example, the bitter strikes of the last decade in which Mexican American and Filipino farm workers were trying to organize into unions, were broken not by "anglos" (whites) or blacks, but by illegal immigrants from Mexico.

Cesar E. Chavez, of the United Farm Workers Organizing Committee, AFL-CIO, has said, "It is not only an illegal act . . . but a very serious moral problem. It also frustrates the organizing efforts of legitimate unions throughout the country by employing illegal entrants—wetbacks—as strike breakers."<sup>2</sup>

The flow of illegal immigrants could probably be reduced if the number of permanent resident visas were increased and the economic incentives for hiring illegal aliens were eliminated.

<sup>1</sup> *New York Times*, April 23, 1972, p. 15.

<sup>2</sup> Telegram quoted in Hearing before the Committee on Finance, U.S. Senate, November 29, 1971, p. 66.

Objectives: 2 2, 4, 5 1, 2, 3, 9, 10, 11, 12

## G. POPULATION DISTRIBUTION

Americans are a metropolitan people, and our transition from rural to metropolitan has been rapid. Around the year 1900, 60 percent of the American people lived on farms or in villages. In 1970, about 70 percent lived in metropolitan areas—cities of 50,000 or more, and the county or counties that are part of the city's economic network. By the year 2000, 85 percent of us will be metropolitan residents.

Between 1960 and 1970, the population of the United States grew 13 percent, while the metropolitan population grew 23 percent. What are the sources of metropolitan growth? In the 1960s, about three-fourths of the growth was natural increase—the excess of births over deaths.

This rapid change means different things to different people. To the man in Los Angeles, it means rapid growth throughout Southern California. This often leads to unplanned and haphazard development, ignoring the aesthetic potential of the natural surroundings. Tract housing developments are marked off by smoggy and noisy expressways. Prosperity collides with a fragile environment.

To a housewife in Nebraska, it means the loss of population in her small farming town which reached its peak population in 1920. Family, friends, and neighbors, particularly the young and better trained, have moved away. Tax revenues are shrinking and essential public services are becoming more limited. She and her husband can remain where they are, but only at the cost of a difficult and uncertain livelihood.

To minorities in the central cities, the process of metropolitan growth means discrimination that keeps them in a ghetto area with crumbling old apartments and abandoned houses. And it means that it is harder than ever to reach the jobs opening up in the suburbs as companies shift their operations outward.

## Activity #1

The table below may be used to begin a discussion on urban migration and rural depopulation.

**U.S. COUNTIES GAINING OR LOSING POPULATION, 1960-1970**

Type of county	Total counties, 1960	Counties gaining population, 1960-70	Counties losing population, 1960-70	Percent counties losing population
All types	3,098	1,742	1,356	43.8
Urban	831	604	227	27.3
Rural	2,267	1,138	1,129	49.8
Partly urban	1,292	772	520	40.2
Entirely rural	975	366	609	62.5

Source: Population Studies Group, Economic Development Division, Economic Research Service, U.S. Department of Agriculture.

Note: Urban counties have 50 percent or more of the total population residing in urban areas (places of 2,500 or more persons). Rural counties are all those counties not classified as urban and are subdivided into two types. Partly urban counties have some urban and some rural areas, but less than 50 percent of the total population lives in urban areas. Entirely rural counties have no urban areas.

### Questions:

1. What trends can you identify from the data?
2. What kinds of problems would this pattern of migration create for rural areas? for metropolitan areas?

## Activity #2

The evolution of our nation from rural to metropolitan has raised problems due to rapid change. Suburbia has expanded, while central cities have lost population. Many rural areas and small towns are shrinking, with serious consequences for those left behind.

The composition of population is also shifting in many communities. In large metropolitan areas, for example, the proportion of blacks in the central cities is growing, while the surrounding suburban areas are growing with an influx of whites.

Such distribution and composition shifts have meaning for individuals because they affect availability of jobs, homes, schools, recreation, and room to live in a fit environment, whether it be rural or urban.

To become aware of the distribution changes that may directly influence members of your class or group, attempt to design a profile of your community. At the conclusion of the exercise, students may be able to see community development poten-

tial and to propose recommendations for local projects, such as setting up a day-care center, pressing local government for a playground, or encouraging voter registration.

The following resources for completion of the community profile are available from the U.S. Government Printing Office Washington, D. C. 20402

- Census of Population, 1970, *General Population Characteristics*, PC(1)-B. One per state.
- Census of Population, 1970, *General Social and Economic Characteristics*, PC(1)-C. One per state.
- *Census Data for Community Action* (1972).

The public library, city planning office, mayor's office, and the Chamber of Commerce often have such census reports on hand. Department of Commerce field offices in 42 cities also stock these reports for their surrounding areas.

Use the following form for obtaining information for the community profile.



**COMMUNITY PROFILE**

Community \_\_\_\_\_ State \_\_\_\_\_  
 (choose city or county)

Type: Rural \_\_\_\_\_ Suburban \_\_\_\_\_ Urban \_\_\_\_\_

Population:	1950		1960		1970	
	No.	Percent	No.	Percent	No.	Percent <sup>a</sup>
All ages .....	_____	_____	_____	_____	_____	_____
0-14 .....	_____	_____	_____	_____	_____	_____
15-24 .....	_____	_____	_____	_____	_____	_____
25-44 .....	_____	_____	_____	_____	_____	_____
45-64 .....	_____	_____	_____	_____	_____	_____
65+ .....	_____	_____	_____	_____	_____	_____

White .....	_____	_____	_____	_____	_____	_____
Nonwhite .....	_____	_____	_____	_____	_____	_____

Employment status<sup>b</sup>  
 Persons employed at age 16 and over

Total .....	_____	_____	_____	_____	_____	_____
Male .....	_____	_____	_____	_____	_____	_____
Female .....	_____	_____	_____	_____	_____	_____

School enrollment  
 Persons aged 3-34<sup>c</sup> .....

	1950	1960	1970
Median school year completed <sup>d</sup>			
Male .....	_____	_____	_____
Female .....	_____	_____	_____
Median income of families .....	_____	_____	_____

According to the evidence above, what changes are taking place? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Notes:  
 a. To obtain percent distribution, divide the number of persons in a particular group by the total number of persons in the entire group.  
 b. Percent of persons in the labor force ages 16 and over is compared with the total population of those ages.  
 c. The Census Bureau used ages 3-34 in estimating school enrollment in 1970. In 1950 and 1960, figures are based on the group aged 5-34.  
 d. The median is the value that divides the distribution into two equal parts, one-half of the cases or units falling below this value and one-half of the cases exceeding this value.

## 1. Back to the Country

- How can a reverse trend back to the country be stimulated?
- What role would rapid travel, radio, teletype, and closed circuit television play?
- Are our communications and data transfer systems developed sufficiently to handle a widely dispersed working force?
- What are the economic advantages of city-centered industry?
- Could industry be dispersed to the countryside?

## 2. Small Cities

- How could small cities be connected to major markets?
- What social problems are likely to be less severe in small cities than in heavily urbanized areas?
- Do our small cities have the capacity to absorb 10 to 25 percent of the 40 million expected increase by the year 2000?

## 3. Secondary Growth Centers

- What methods could be used to attract more of the population to these cities?
- What programs could be initiated to prevent the problems existing in the three megalopolitan areas from developing in the secondary growth centers?

## 4. New Towns

- What is the social appeal of planned communities?
- Where does the money come from to build and maintain them?
- Should these new towns be required to meet criteria of balanced land use, income distribution and racial integration?
- On what basis should the location of new towns be decided?

## Activity #3

Even assuming growth at the 2-child rate, the metropolitan population would grow by nearly 40 million people between 1970 and the year 2000, through natural increase alone (excess of births over deaths).

Where will these people live? By the year 2000, more than six of every ten Americans are expected to live in a metropolitan area of 1 million or more people. By that time, there will be 44 to 50 such places.

Several alternative distribution patterns of future U.S. population can be suggested. Ask students to propose policies whereby urban population could be redistributed. At least the following four alternatives should be included:

1. Back to the Country
2. Small Cities (10,000–50,000)
3. Secondary Growth Centers (50,000–250,000)
4. New Towns

Each student should select one alternative pattern for investigation. After students are grouped for discussion of their proposed alternative, ask each group to prepare a five-minute presentation on the feasibility of each redistribution pattern. Ask each group to deal with the preceding questions regarding their proposed alternative.

Objectives: 3 3.5 2, 6, 7, 10, 12

## H. POPULATION: WHAT IT MEANS FOR THE POOR AND POWERLESS

### A Few Facts

**Fertility** The fertility of minority groups is higher than that of the rest of the population. Despite their higher fertility rates, however, minorities—precisely because of their smaller numbers—contribute less to population growth than does the rest of the population. *The fact is that 70 percent of the annual rate of natural increase (excluding immigration) is attributable to white middle-class Americans.*

Americans, regardless of their racial or ethnic backgrounds, tend to have smaller families as their education and incomes improve. As new generations move into the mainstream, their average family size decreases. For example, blacks with high school diplomas have about the same number of children as their white counterparts; college-educated blacks have fewer children, on the average, than their white counterparts.

**Migration** Historically, there has been a close link between a move to the city and upward social and economic mobility. But this link has broken for blacks, the Spanish-speaking, Indians, and other minority groups.

Black people who move from farm to city are better off economically than those who stay on the farm. But the better jobs and educational opportunities available in the city have not always been open to minority group members seeking them.

**Mortality** Blacks live, on the average, seven years less than whites. This difference is due primarily to premature death among black adults between 20 and 60 years of age, and secondly to higher mortality among black children.

A Houston, Texas, case study considered by the Commission showed that in 1960, deaths among Mexican Americans were 12 percent higher for males and 67 percent higher for females than for the non-Spanish whites. Deaths among Houston's black population were higher by 43 percent for males and 87 percent for females. National figures show that total mortality among Indians is 50 percent higher than white mortality.

## Activity #1

Use the chart, "Unwanted Fertility in the United States, 1970," which gives figures both by race and education. Provide copies to students and discuss the contents by using the six questions below.

### Questions:

1. What characteristics are being compared in the chart below? What does the chart show?
2. Which group is most likely to have the highest number of births per woman? lowest?
3. Which group of women had the highest percent of unwanted births? unplanned births?
4. Was there any group for which the number of unplanned births was below 25 percent? Unwanted births below 5 percent?
5. What might happen to the population if women only had children that they wanted and planned? Do you think this would be desirable? Why or why not?
6. Why do you think some groups are more successful than others in planning pregnancies? Do you think this could be changed? How?

### UNWANTED FERTILITY IN THE UNITED STATES, 1970<sup>a</sup>

Race and Education	Most Likely Number of Births per Woman	Percent of Births Unwanted, 1966-70	Percent of Births Unplanned, <sup>b</sup> 1966-70	Theoretical Births per Woman without Unwanted Births
All Women	3.0	15	44	2.7
College 4 +	2.5	7	32	2.4
College 1-3	2.8	11	39	2.6
High School 4	2.8	14	44	2.6
High School 1-3	3.4	20	48	2.9
Less	3.9	31	56	3.0
White Women	2.9	13	42	2.6
College 4 +	2.5	7	32	2.4
College 1-3	2.8	10	39	2.6
High School 4	2.8	13	42	2.6
High School 1-3	3.2	18	44	2.8
Less	3.5	25	53	2.9
Black Women	3.7	27	61	2.9
College 4 +	2.3	3	21	2.2
College 1-3	2.6	21	46	2.3
High School 4	3.3	19	62	2.8
High School 1-3	4.2	31	66	3.2
Less	5.2	55	68	3.1

Source: Commission Report, p. 97.

<sup>a</sup> Based on data from the 1970 National Fertility Study for currently married women under 45 years of age.

<sup>b</sup> Unplanned births include unwanted births.

## Activity #2

The history of race relations in our nation has left a legacy of fear and suspicion concerning the implication of "population policies." Five minor-

ity group members testifying before the Commission offered examples of such suspicion. Distribute the following statements as initial points for discussion.

### **Excerpts from Testimony by Minority Group Members <sup>1</sup>**

#### **Dr. Eugene S. Callender, President of the New York Urban Coalition**

Within this country, Blacks, Indians, Chicanos, Puerto Ricans, and Orientals feel that such [population] control is solely to the advantage of the majority population. Minority groups at this point in history do not feel that they can afford to trust that the "nobler instincts" of the white majority will prohibit the resurgence of subtle and overt forms of racism.

#### **Black witness at the Washington hearings:**

If this [ecology] movement also talks about fewer people, the question of "who gets to survive" is raised. So, to us, it becomes "every man for himself" now, because we have no reason to expect that we won't get the worst of this one too.

#### **Spanish-speaking witness in Los Angeles:**

The only way we will get groups like yours to be responsive to our needs is through sheer weight of numbers. [It may be that] what we must do is to encourage large Mexican-American families so that we will eventually be so numerous that the system will either respond or it will be overwhelmed.

#### **The Reverend Jesse Jackson, black minister from Chicago:**

You have to recognize that the American group that has been subjected to as much harassment as our community has is suspect of any programs that would have the effect of either reducing or levelling off our population growth. Virtually all the security we have is in the number of children we produce.

#### **Black witness from Little Rock, Arkansas:**

I suggest to you that many of us who are advantaged have a vested interest in keeping the disadvantaged exactly where they are. Our economic and political strategies are clearly designed to keep a segment of our population poor and powerless. I suggest that many of our social welfare programs have failed and are failing to help the poor and oppressed among us because they were never intended to help them.

<sup>1</sup> Commission Report, pp. 72-74

Objectives: 1, 2 2 2, 7, 11, 12

## I. RESOURCES AND THE ENVIRONMENT

The pressure that the United States puts on resources and the environment during the coming 30 to 50 years will depend on four important factors:

1. The size of our national population.
2. The size of populations in local areas.
3. Consumption patterns: amounts and types of goods and services.
4. Ways in which these goods and services are produced, used, and disposed of.

The Commission carefully studied the relationships among these four factors. They discovered that because of our large population and our high economic productivity, the United States puts more pressure on resources and the environment than any other nation in the world.

Economic studies indicate that the total volume of goods and services produced in the United States—our gross national product, or GNP—will be twice its present size by the year 2000. By 2020, if the population continues to grow along with rapid economic growth, GNP could be seven times greater than it is now. Regardless of future population growth, increases in output will create more demand for resources. (See page 10 for discussion of resources.)

Population growth is, nevertheless, an important factor. Consider three examples:

1. Pollution emissions in the year 2000 would be less with the 2-child than with the 3-child rate

of population growth—from 5 to 12 percent less, depending on the pollutant.

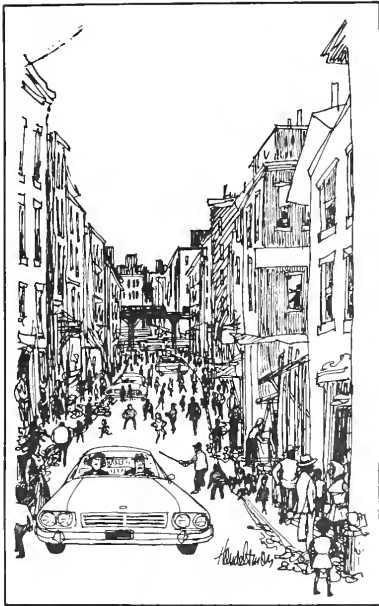
2. Growing population and increasing economic activity will cause serious water shortages. Such deficits will spread faster if population growth follows the 3-child projection than if it follows the 2-child projection.
3. The demand for recreational facilities by the year 2000 could be as much as 30 percent less under the 2-child than under the 3-child rate of growth.

The point is that continued population growth limits our options. With more people and less land per person, we have fewer alternatives, less room for diversity, less room for error.

### Activity #1

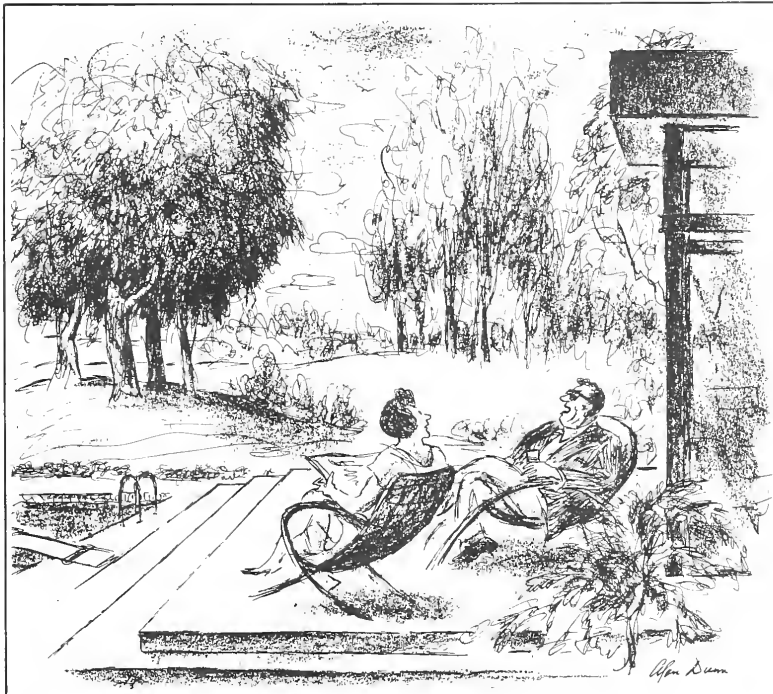
As cities become congested, those who can afford to move to the suburbs do so. They think they are leaving environmental problems behind. These people may not recognize that wherever they move, their consumption has an impact on the environment.

The cartoons on page 57 may be used as springboards for discussion. One may be used as evidence of urban congestion. Twenty years from now the man and woman who see no problem with the environment might look at their own suburban neighborhood and say: "I can remember this neighborhood before it became uninhabitable." More importantly, both cartoons emphasize the contrast between those who can afford to run away from urban problems and those who have no choice but to remain in the cities.



Drawing by Handelsman;  
 © 1972 The New Yorker  
 Magazine, Inc.

*"I can remember this neighborhood  
 before it became uninhabitable."*



*"I ask you, what's wrong with the environment?"*

**Questions:**

1. What is the main idea expressed in each cartoon?
2. What does it mean to live in an "uninhabitable" neighborhood? If the neighborhood is uninhabitable, why do so many people live in it?
3. Do you think there is anything wrong with the environment you live in? Why or why not?
4. Do you think that congestion is a problem for everyone, or just for people in the cities? Explain your answer.

Drawing by Alan Dunn;  
 © 1972 The New Yorker  
 Magazine, Inc.

## Activity #2

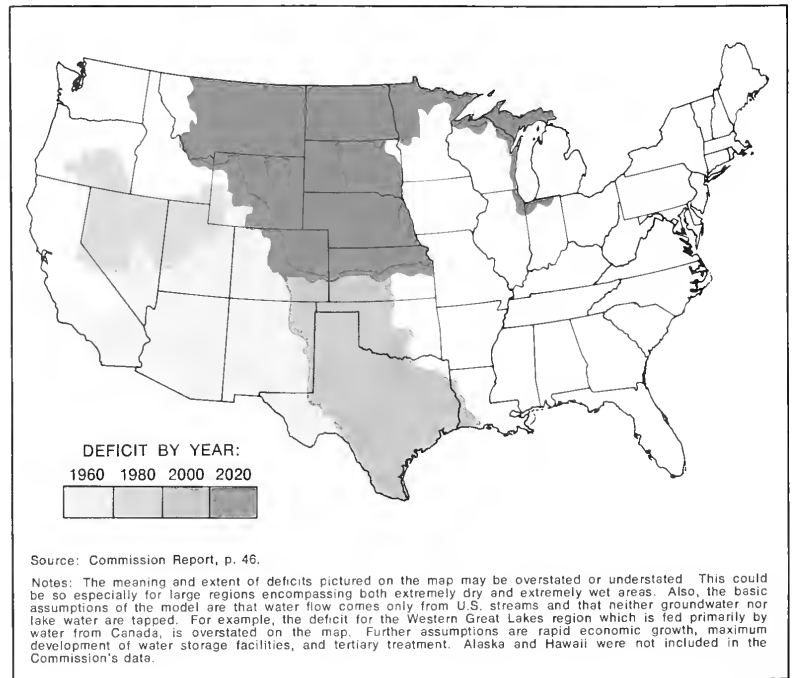
### Community Water Supply

The map below shows present and projected water shortages by region in the United States. Ask students to locate present water shortages in the Southwest and to trace projected shortages spreading East and North in the next 30 to 50 years. Do you live in one of these regions? Does someone you know live in one?

At the local level, problems may be more or less serious and they may occur at different times. Ask students to survey the water needs and supply in their own community. The following questions should be asked:

- Do you know where the water you drink—the local water supply—comes from?
- Does it come from wells? reservoirs? rivers or lakes?
- How is it treated?
- What are the dangers of pollution in this water supply?
- How is it transported?
- Does the community operate its own water supply or does it purchase it elsewhere?
- What are the prospects for the future?
- How much planning is made for the future water needs of the community?
- How far into the future are plans being made?
- What population estimates or assumptions for future community growth are used in estimating the demand for water?
- What are the prospects for increased water costs passed on to consumers?

### WATER DEFICIT REGIONS: 3-CHILD PROJECTION





### Activity #3

Twenty-nine states in the United States face competition for the use of coastal wetlands and numerous development options. Land-use competition is not restricted to coastal areas, and as President Nixon stated in early 1973, "balancing the need for development and growth with the need to preserve and enhance our environment has become a major issue of our time." The article below reflects some of these conflicting issues.

Choose a spokesman for each of the following interest groups and have students or participants outline the policies and demands of each: conservationists, builder/developers, and industrialists.

### Questions:

1. What are the major conflicting issues? Is it possible to satisfy the demands of all three interest groups?
2. What are the costs involved for each of the following:
  - wildlife and the natural environment
  - vacationers wanting an inexpensive weekend retreat
  - the local job market
  - the economic prosperity of the community
  - the need for increasing energy sources
3. Who should establish and regulate development policy? Why?
4. What has your community done to encourage critical, long-run land-use planning?

## Delaware Wetlands at Crossroads

With Refineries Halted, Decision Now One of People or Nature

By George C. Wilson

Washington Post Staff Writer

REHOBOTH, Del.—From 1,000 feet up, it becomes clear what the argument is all about. The light airplane, hanging in the stiff headwind, looks down on the choices Delaware and other coastal states have to make.

There, on the point of sands reaching into Indian River Bay behind the ocean beach running between Rehoboth and Bethany, is one option. It is a summer city of mobile homes rising out of the marsh.

Dredges have dug curving paths through the grassy wetland, leaving water-filled lagoons behind them. The sand sucked up has been piled on to the banks of the new lagoons, forming the foundation for trailer homes.

Another option for those planning Delaware's future comes into view as the plane flies north along the coast, beyond Rehoboth, gliding low over wetlands set aside by the state for ducks and fish—not for people.

At one salt-water pond deep in the isolated wetlands north of Dover, Canada geese paddle away unconcernedly until the noise of the plane's engine reaches them. Then they fly briefly out of the water and plop down again on the far side of the lead-colored pond hidden among the acres of brown cord grass.

And finally, near the northern border of the state at Delaware City, the plane reaches the third option—intensive development of the wetlands. It skirts around the stacks of the Getty oil refinery processing the crude oil pumped out of tankers sailing into Delaware Bay.

The three locations covered by the flight symbolize the policies of no growth, moderate growth and intensive growth. The need to

protect the fragile chain of life for ducks and fish figures in the no growth argument; the population's yearning for waterfront places to spend its increasing amount of leisure time adds thrust to the moderate growth possibility, and concern about the "energy crisis" buttresses the case for intensive development along the coast—like building more oil refineries.

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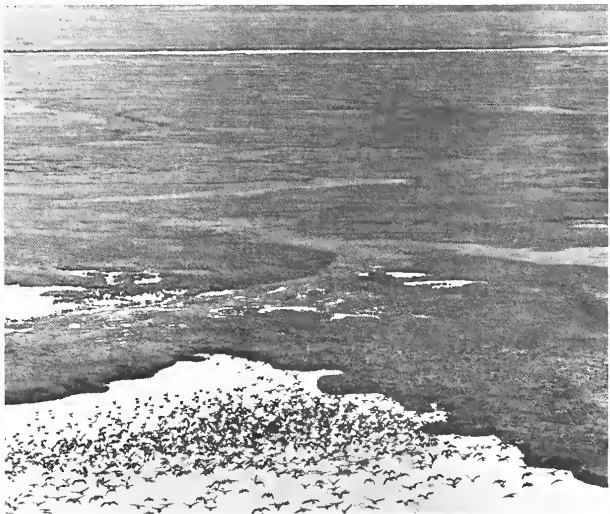


Photo by Ken Feil—  
*The Washington Post*

Objectives: 1 3, 4, 5, 6 7, 8, 9, 10, 12

## J. HUMAN REPRODUCTION

Responsible parenthood means that parents have some understanding of the implication of their reproductive decisions for themselves and their children. While the benefits and rewards of children are well known, many people fail to recognize the emotional and financial costs involved. For example, direct costs cover raising a child from birth through high school or college. In addition to these direct costs, one parent—usually the woman—will tend to spend more time at home, thus giving up an income which she might otherwise have earned.

Information on the costs to the family of raising a child is an important part of education for parenthood. With some idea of the financial demands of children, parents can plan ahead and be better prepared to provide the kind of life they want for their children.

Yet other costs are involved when couples have children before they want them. Recent research has shown a high level of unplanned pregnancies and unwanted births in the United States. According to estimates of the Office of Population Research at Princeton University, which conducted the 1970 National Fertility Study, 44 percent of all births to currently married women during the five years between 1966 and 1970 were unplanned; 15 percent were reported by the parents as having never been wanted. *Theoretically* this many unwanted births suggests that 2.65 million of the births occurring in those five years would not have occurred had perfect fertility control been available.

The costs of such a high incidence of unplanned reproduction are many—financial, social, psychological, and health. Family budgets may be seriously strained by an unexpected birth. Those families who can least afford this kind of burden most often face it.

### Activity #1

More than half the states have laws that prohibit or restrict the sale, distribution, advertising, and display of contraceptives. The Commission found, for example, that 22 states prohibit the sale of all or some contraceptives; 23 states prohibit commercial advertising and display of contraceptives or information about them.

It is difficult to interpret these anti-birth control laws because enforcement is uneven; and in some states, court decisions have changed the letter of the law.

To give students a better idea of what impediments actually exist in their own state and community, suggest an inventory. Ask students to investigate the following:

1. The statutes in their state that limit access to contraceptive information, procedures, and supplies.
2. Attempts to change the laws or circumvent them. (For example, does the college health service provide birth control services to minors despite the state laws? With what consequences?)

Resources for research on this question could be the law sections of various libraries, neighborhood pharmacists, physicians, and local agencies, such as Planned Parenthood and Zero Population Growth chapters.

President Nixon recognized the health costs of unplanned childbearing when he said:

... involuntary childbearing often results in poor physical and emotional health for all members of the family. It is one of the factors which contributes to our distressingly high infant mortality, the unacceptable level of malnutrition...<sup>1</sup>

<sup>1</sup> Commission Report, p. 98.

## Activity #2

One lesson learned by the Commissioners as they studied the matter of abortion was that sensible people could disagree over how to treat the issue. Logical arguments could support several different positions.

The Commissioners themselves disagreed over what laws should exist regarding abortion. Five Commissioners disagreed with the majority's recommendation on abortion and wrote separate statements of their views.<sup>1</sup> Nineteen Commissioners felt that "the matter of abortion should be left to the conscience of the individual concerned, in consultation with her physician, and that states should be encouraged to enact affirmative statutes creating a clear and positive framework for the practice of abortion on request."<sup>2</sup> The Commission admonished that abortion should not be considered a substitute for family planning, but rather as one element in a complete system of health care.

In January, 1973, the U.S. Supreme Court rendered a decision on abortion similar to the Commission majority's recommendation. This ruling specified the following:

For the first three months of pregnancy, the decision to have an abortion "must be left to the medical judgment of the pregnant woman's attending physician." For the next six months of pregnancy, a state may "regulate the abortion procedure in ways that are reasonably related to maternal health," such as licensing and regulating the persons and facilities involved. For the last ten weeks of pregnancy, any state may prohibit abortions, except where they may be necessary to preserve the life or health of the mother.

The Constitutional basis for this decision is described in the following excerpt from the Court's majority opinion:

*The Constitution does not explicitly mention any right of privacy. In a line of decisions, however, . . . the Court has recognized that a right of personal privacy, or a guarantee of certain areas or zones of privacy, does exist under the Constitution . . .*

*This right of privacy, whether it be founded in the Fourteenth Amendment's concept of personal liberty and restrictions upon state action, as we feel it is, or as the District Court determined, in the Ninth Amendment's reservation of rights to the people, is broad enough to encompass a woman's decision whether or not to terminate her pregnancy . . .*

Despite the Court's ruling, the abortion controversy will continue. The following springboard provides the basis for understanding the complexity of the controversy surrounding the abortion issue. The arguments developed in the following four positions provide an impetus for discussion in which participants examine their own values about abortion.

Create a role-playing situation by asking four students to take one of the following positions. Equal time should be given for the development of all four.

<sup>1</sup> Commission Report, pp. 148-60. See separate statements made by the following Commissioners: Marilyn Brandt Chandler, p. 148; Paul B. Cornely, M.D., p. 148; Alan Cranston, p. 151; John N. Erlenborn, p. 156; and Grace Olivarez, p. 160.

<sup>2</sup> *Ibid.*, pp. 103-104.

1. The first of these positions is total prohibition of abortion except in the case of a direct threat to the life of the mother. It asserts that life begins when the sperm and ovum unite and the genetic basis for a human individual comes into being. Attempts to set the beginning point of life later than formation of a one-celled zygote are arbitrary and dangerous; if there is any doubt, the benefit of the doubt should be given to the fetus. Admittedly, there are many children that are unwanted. But life cannot be made dependent upon whether or not someone, even the mother, wants that child. The child, like all individuals, has a claim to life that is all its own. To liberalize laws to permit abortion is to open the legal door for other socially unwanted to be eliminated. A society that finds it necessary to solve the social problem of the unwanted child by sanctioning abortion, is a society that threatens the very foundations of human dignity.

2. A second position is that abortions should be prohibited except where (1) the mental and physical health of the mother are endangered, (2) there is a substantial threat of a defective child being born, or (3) the pregnancy results from rape or incest. Those holding this position generally assert their concern for the dignity of human life, but contend that a total prohibition of abortion does not serve that goal. Rather, they maintain that the degradation women undergo in seeking illegal abortions, the suffering of defective children, the agony of women pregnant because of rape or incest, the unsupportable burden which many pregnancies impose upon women already in poor physical or mental health, are themselves a basic threat to the dignity of life. Those holding this view believe the law should make provision for abortion in cases of serious stress and that these cases can be spelled out in law. In states where such statutes have been in force, a review board has usually considered whether applications for abortion fall under any of the established categories.

3. A third position is that abortion should be a matter decided by a woman and her physician up to a specified point in pregnancy—usually six months. Those holding this view believe the existence of an abortion law is important to discourage late term abortions as well as to protect the health of the woman involved. The law should allow women, their physicians and other counsellors to reach the best possible judgment; a law that is too precise or tries to lay down too many conditions would be a hindrance.

4. A fourth position holds that all laws restricting access to abortion should be repealed. This position holds that repeal of abortion laws would not impose abortion on anyone; it simply recognizes the right of women to come to their own decisions in the matter. Laws that permit abortion for some reasons but not for others are as bad as total prohibition of abortion. They force women into the humiliating and degrading position of having their fate decided by others. Those supporting this position ask why the state, through its laws, should take any position on a decision so fundamentally personal as this.

These positions represent, in an oversimplified form, some of the leading arguments for and against the legalization of abortion. Not every person feels comfortable with any one of these stated positions, but in a role-playing situation these perspectives can encourage examination of key differences between pro- and anti-abortion arguments.

Individual students might find it interesting to read and react to the recent rulings on abortion made by the U.S. Supreme Court. *Slip Opinions* are available from the U.S. Government Printing Office, Washington, D. C. 20402. No 70-40, Doe, et al. vs. Bolton, Attorney General of Georgia, et al. (\$45) and No. 70-18, Roe, et al. vs. Wade, District Attorney of Dallas County, Texas (\$1.00).

#### Questions:

1. What are the different human "rights" argued for?
2. Whose rights are involved (mother, father, fetus, society)?
3. What values are the basis for each of the positions?
4. What values seem to be the basis for the Commission's majority recommendation on abortion?
5. Do you agree? Disagree? Why?

Objectives: 4,5 1,4,6,9,11,12

## K. NON-GROWING POPULATION

A population stops growing when the number of births has come into balance with the number of deaths. Without the effects of immigration, the size of the population would remain relatively constant. In the United States if families had, on the average, two children, we could eventually reach a non-growing population.

Of course the cessation of growth will not take place overnight. The children born during the baby boom decades form a large proportion of our population today and they are now entering the ages of marriage and childbearing. This "built-in" growth factor means that our population will continue to increase for about 70 years.

It is important to understand the meaning of "on the average" as it relates to family size. Many people do not marry, and some who do marry either are not able to have, or do not want, children. On the other hand, a substantial number of couples have more than two children. As long as the differences balance out to two children, we can eventually have a non-growing population.

Many developments—some old and some new—would indicate that the end of population growth in the United States is possible. In 1972, fertility reached a level equivalent to a 2-child family. On the other hand, we are experiencing other trends that might prevent us from sustaining this low fertility level long enough to reach a non-growing population.

At right is a list of current factors that influence fertility in the United States. Some make a non-growing population appear likely. Others indicate that reaching a state of no growth will be a difficult and slow process.

Distribute the list to students or group participants. In discussion, ask them to make two lists: one of factors that should help us reach a non-growing population; the other a list of factors that are barriers to reaching it. Ask students to suggest those trends that appear to be the strongest forces in American society. Which are the oldest?

- This nation has an ideological commitment to growth.
- The technical quality of contraceptives has improved in the past 10 years.
- Youthful marriage is becoming less common.
- The role of sex in human life and of the reproductive process and its control is often poorly understood.
- In the United States in the 1930s, the response to very low fertility was anxiety over national prosperity, security, and virility.
- Concern over the effects of population growth has been increasing.
- Family life and the role of mother have been glorified in television programs.
- A prominent theme in women's magazines has been "child-saves-marriage."
- The birth rate has declined over the past ten years.
- There are restrictions on the availability of contraception, sex education, and abortion.
- The women's liberation movement is attempting to expand women's options related to work and family roles.
- During the period 1966-70, 44 percent of all births were reported as unplanned. Fifteen percent were reported as unwanted.
- The family-size preferences of young people now entering child-bearing age are lower than those of the preceding generation.
- The number of women in the reproductive age groups has increased sharply and by 1980 will be even greater.

Objectives: 2,3 5,6 2,7,8,9,10,11,12

## L. POPULATION POLICY

The Commission made a definite judgment about the choice the nation should make about future growth. After studying the effects of future growth alternatives on our economy, society, government resources, and the environment the Commission found "no convincing argument for continued national population growth."<sup>1</sup>

The Commission then offered its recommendations with careful statements of policy goals so that we could reach informed and deliberate decisions about population growth and distribution, not only at the national level, but in states and local communities as well.

### Activity #1

#### Planning Population in the State of Vermont

It has finally happened! Vermonters were not able to act quickly enough. Vermont has fallen to the counter-culture. The process started slowly as large numbers of youth moved into the state but gathered steam as more and more natives, fearful of the long-haired newcomers moved to New Hampshire and up-state New York. But now the newcomers control the state and constitute nearly 65 percent of the population. The median age of the state's population has dropped to 26.8 years (half of the population above, and half below 26.8 years). The birth rate is soaring. Unemployment is rampant and to make it worse, a Burlington newspaper reports that there are now more poets and unpub-

lished novelists in agriculture than there are experienced farmers. Migration of 16-25 year olds, including a large number of unmarried teenage girls who are pregnant, continues.

This situation offers provocative material for a discussion of population policy. Distribute (page 66) the article "Non-Yankee, Stay Home!" to the students. Ask them to investigate this situation and recommend policies.

The group should be divided into three sections. The first includes expert demographers who will assess the facts. The second will serve as a commission that will formulate new policies. The third group are native Vermonters who will attempt to develop ways to attract their fellow citizens back from New Hampshire.

The three groups may work outside of the class until the demographers have prepared their report for evaluation by the others. Then the commission should conduct its deliberations while hearing from the Concerned Vermonters.

While this exercise is being carried out, the students may be directed to Chapter 9 of the Commission's Report, "Population Policy," pp. 75-78. The chapter on immigration, Chapter 13, may be useful for the Concerned Vermonters. Use the table on age-sex structure as well as the map showing county population change between 1960 and 1970 on page 65. Other resources might include:

U.S. Bureau of the Census, *Census of Population: 1970, General Social and Economic Characteristics*, PC(1)-C47, Vermont (December 1971); and U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings States and Areas*, Bulletin 1370-8 (1972).

<sup>1</sup> Commission Report, p. 75.

## CHARGES TO THE GROUPS

**GROUP 1:** You are the experts on population, sociology, government, and economics. The State of Vermont is in a novel position due to the situation described in the article. Within the constraints set by this description, design a report on the demographic and social situation of Vermont. Use the Commission Report as a source of insights and some of the 1970 census data for Vermont provided below as the basis for your calculations of the demographic situation. Make your report challenging but plausible.

**GROUP 2:** You are the Commission on Population Growth and the Future of Vermont. While you await the report of your demographic experts, you must begin your deliberations. You already know that the economy is in disarray and the influx of new persons—many with real problems—is adding a huge burden to your already strained social services. What recommendations will you make? In the process, you must give a careful hearing to the Committee of Concerned Vermonters who have definite views on the problem.

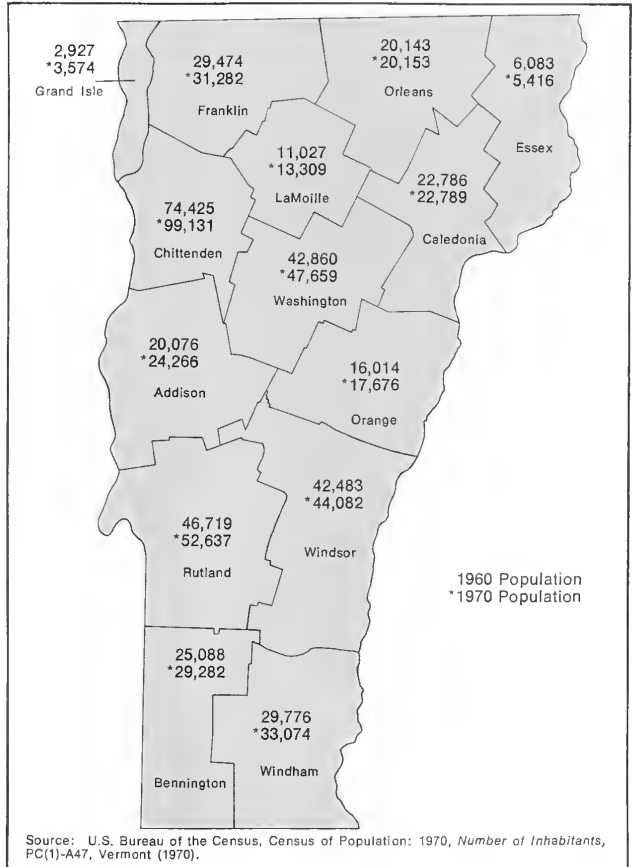
**GROUP 3:** You are the Committee of Concerned Vermonters. You want to regain control over the state, but there are only four possibilities: (1) native Vermonters must increase their fertility, (but this is not easy given the fact that median age of the group is 30.2 years); (2) the newcomers will need to control their fertility; (3) large numbers of newcomers will need to return to their former states; or (4) somehow those Vermonters who left must be encouraged to move back from New Hampshire and elsewhere.

## VERMONT AGE-SEX STRUCTURE, 1970

	Male		Female	
	Population	% Distribution	Population	% Distribution
All ages	217,166	100.0	227,164	100.0
Under				
5 yrs.	20,294	9.3	19,364	8.5
5-9	23,523	10.8	22,382	9.9
10-14	23,715	10.9	21,937	9.7
15-19	21,933	10.1	22,464	9.9
20-24	17,403	8.0	18,606	8.2
25-29	14,452	6.7	14,472	6.4
30-34	11,979	5.5	11,769	5.2
35-39	11,315	5.2	11,398	5.0
40-44	11,731	5.4	12,238	5.4
45-49	11,510	5.3	12,260	5.4
50-54	10,934	5.0	11,589	5.1
55-59	9,906	4.6	10,693	4.7
60-64	9,067	4.2	9,908	4.4
65-69	7,040	3.2	8,617	3.8
70-74	5,355	2.5	7,358	3.2
75+	7,009	3.2	12,109	5.3
median age	25.6		28.1	

Source: U.S. Bureau of the Census, Census of Population: 1970, *General Population Characteristics*, PC(1)-B47, Vermont, table 21 (1971).

## VERMONT COUNTIES



## NON-YANKEE, STAY HOME!

A decade ago, more cows than people lived in the State of Vermont. Most "woodchucks," as native Vermonters are called, cheered in 1963 when the balance finally turned in favor of humans and for some time thereafter the steadily swelling influx of tourists, second-home buyers and other urban escapees seemed to bode the state nothing but good. Now, however, growing numbers of Vermonters are beginning to wish that all those non-Yankees would simply stay home. "Vermont ain't Vermont any more," complains Theron Boyd, a 70-year-old farmer. "Folks used to come here because it was different. Now they're trying to make it look like every other state. That's the darn of it."

The invasion from out-of-state has already brought radical change to Vermont. Land prices are soaring, particularly in the southern counties, where an acre that sold for \$15 in the 1950s can fetch \$1,000 today. Few woodchucks can afford those prices. "There's resentment against the people who are coming in and buying the land that Vermonters have been saving up for," reports Peter Martin, an aide to Gov. Deane C. Davis. There's also resentment over the fact that resorts and second-home colonies are blotting out the picturesque landscape in some areas and contributing to air and water pollution. This "recreational pollution" has become so severe that last month the state Board of Health warned that boating and swimming might have to be banned on several major lakes unless the towns that use them for drinking water find other sources of supply.

Thus beleaguered, Vermonters have begun to fight the onslaught of outsiders and many are advocating surprisingly drastic measures. In a statewide poll last year, 42 per cent of the people questioned favored closing Vermont to immigrants from out-of-state and a white paper currently circulating around the state office building in Montpelier proposes a future limit on the state population. Last spring, the Vermont legislature voted to cut back the funds that supported the state's tourist offices in New York and Montreal. Most important of all, Vermont's rock-ribbed Republicans are beginning to institute strict controls over the use of land. Some towns are adopting tough zoning laws to restrict developers and the state government is expected to announce new land-use guidelines this month.

**Specter:** At one point, a fair number of Vermonters feared that they were going to be overrun by hordes of hippies. Their fears may have been fanned when two Yale Law School students wrote an article proposing that counter-culturists simply take over a small state, such as Vermont. More recently, New York journalist Richard Pollak, writing in *Playboy*, suggested that women's liberationists might turn Bennington County into Steinem County, and that triumphant Yuppies could rename Windsor County in honor of Abbie Hoffman. The article prompted one horrified reader to raise the specter that

Vermont was about "to be 'liberated' by long-haired, grass-blowing freaks seeking *lebensraum*."

In sober fact, however, native Vermonters seem to get on surprisingly well with the more hardworking inhabitants of the state's 250 communes (which so far show no sign of taking over anything). Last year, one rural town elected a young communitard to head its municipal finance committee and Peter Martin reports that "we almost fell off our chairs in the Statehouse when one of the old woodchuck legislators tried to help a long-haired youth get a state grant for some work he's doing." "There's a great sense of the work ethic here," says one 28-year-old urban dropout who has turned to farming in Vermont. "But you really have to earn the respect of the old-timers; we've lived here full-time for a year and it's only now that we're getting to know our neighbors."

**Shock:** At bottom, in fact, it is the "straight" settlers that give Vermont the most trouble. In addition to retired people and owners of vacation homes, the state has attracted many middle-class immigrants who hope to find work in Vermont. "It's shocking to us to see professional people come up here without jobs," says Roland Loveless, head of the state's Development and Community Affairs agency. "We're not sure what's going to become of them." Even vacation homes may pose a threat. "What's going to happen to those so-called second homes?" asks state planning director Benjamin Partridge. "I'll tell you: Mom and the kids will stay in the country while Dad works in the city. You can imagine the expensive new services that will be demanded of small towns—new schools, sewage and utilities, more police and fire protection. And it's already happening."

The vacation home developments are also criticized by many woodchucks for poor design. "You couldn't believe those horrible developments," says Partridge. "Some of the first ones had individual septic tanks on less than half an acre; the residents were literally dumping sewage on each other. And around those skilodge developments were all sorts of ugly restaurants and garish night-clubs. It woke us up, all right."

One of the biggest developments is Quechee Lakes, a 6,000-acre complex near White River Junction. Over the next decade, at least 2,000 houses and 500 condominiums will be erected around private golf and ski facilities. Many of the current inhabitants of the area are dismayed by the vast undertaking. And last May, the citizens of neighboring Pomfret took steps to keep the development from spreading into their town. They drew up a zoning code that prohibits the sale of land in parcels smaller than two acres or the sale of more than two commercially built houses every two years on a single piece of property. "We're not trying to stop progress," contends Pomfret selectwoman Dorothy Moore. "We simply want to slow it down so we can handle it."

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## Activity #2

Within the last half century Japan, England and Wales, France, Denmark, Norway, West Germany, Hungary, Sweden, and Switzerland have all experienced periods of replacement level fertility lasting a decade or more. And today, some countries approaching non-growing populations are concerned about possible labor shortages.

Greece is one nation now implementing a policy to increase her population size. This policy, described in the article (right), takes the form of a "baby bonus."

In marked contrast to this are the kinds of policy goals recommended for the United States by the Commission. Use the article and the excerpt from the Commission Report (page 68) as springboards for comparing diverse population policies, and the different values on which these policies are based.

Students should be encouraged to explore the consequences of each policy for the country in which it is to be implemented; and to examine the implications the two policies could have on other countries. The students should then be encouraged to take a position for or against the proposed policies. Students should also take positions concerning the role of governments in providing incentives for population increases or decreases.

## Greece offers baby bonus to offset population dip

ATHENS—Greece is offering bonuses to families having more than three children as a means of increasing her population.

Concerned that she may end up a nation of stagnant, if not declining population, Greece has decided to give a monthly bonus of \$17 for each child born to couples in excess of three. The Greek population, it is noted, is going up about half the rate of the average of the rest of the world.

Soterios Agapitides, deputy economic minister, notes that the social evolution is out-distancing the economic progress of the nation. In Greece as elsewhere, the rural population is moving into the cities.

Architects and city planners have tried to cram as many people as possible into as small a space as possible. Clusters of apartment dwellings have appeared in the major cities. The average blue-or-white-collar worker can afford only a two or three room flat—just large enough for one or two children.

Although illegal, abortions are relatively inexpensive and easy to obtain.

Emigration is another factor keeping the population down to 8.6 million.

Decades of economic paucity have led many poor Greeks to move abroad. In the decade 1960-69 the manpower drain reached well over 1.7 million. Most head for West Germany, the United States or Australia.

The majority of migrants are in the 20-30 age group.

Officials believe that the baby bonus plan will help alleviate the problem, but the results will not be evident for years.

Reprinted with permission from *The Hellenic Chronicle*, Boston, Mass.

## **Excerpt from the Commission Report**

### **POLICY GOALS**

In the broadest sense, the goals of the population policies we recommend aim at creating social conditions wherein the desired values of individuals, families, and communities can be realized; equalizing social and economic opportunities for women and members of disadvantaged minorities; and enhancing the potential for improving the quality of life.

At the educational level, we wish to increase public awareness and understanding of the implications of population change and simultaneously further our knowledge of the causes and consequences of population change.

In regard to childbearing and child-rearing, the goals of our recommendations are to: (1) maximize information and knowledge about human reproduction and its implications for the family; (2) improve the quality of the setting in which children are raised; (3) neutralize insofar as it is practicable and consistent with other values those legal, social, and institutional pressures that historically have been mainly pronatalist in character; and (4) enable individuals to avoid unwanted childbearing, thereby enhancing their ability to realize their preferences. These particular policies are aimed at facilitating the social, economic, and legal conditions within our society which increase ethical responsibility and the opportunity for unbiased choice in human reproduction and child-rearing. At the same time, by enhancing the individual's opportunity to make a real choice between having few children and having many, between parenthood and childlessness, and between marriage and the single state, these policies together will undoubtedly slow our rate of population growth and accelerate the advent of population stabilization.

In connection with the geographic distribution of population, our objectives are to ease and guide the process of population movement, to facilitate planning for the accommodation of movements, and to increase the freedom of choice in residential locations.<sup>1</sup>

### **Questions:**

- 1. What are some of the factors that are leading to a population decline in Greece? What else can you find out about the population in Greece?**
- 2. What position does the Greek government take toward non-growth? What words or phrases in the article make you think this? Why do you think the Greek government made a policy like this one?**
- 3. Do you think this is a good policy? Why or why not?**
- 4. What are the implications of the Greek policy for another country? For the world?**
- 5. Do you think that governments should make a policy about family size? Why or why not?**
- 6. Do you feel that a non-growing population is a legitimate goal for the United States? For other industrialized countries? For developing countries?**
- 7. What means are available to a country to attain a non-growing population? Which of these do you feel should be used in the United States? Which of these are recommended by the Commission for the United States?**

<sup>1</sup> Commission Report, p. 78.

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- Concerned Demography*, Concerned Demographers. Center for Demography and Ecology, 3224 Social Science Building, University of Wisconsin, Madison, Wis. 53706, periodical, \$2.00 per year. (College)  
Essays prepared by scholars on demographic research and training. Editorship of each issue rotates among various university programs.
- The Diseconomics of Growth*, by H. V. Hodson, Ballantine Books, New York (1973) 239 pp., \$1.25, paperback. (College and adult)  
A British social scientist critically examines the theory of economic growth as it relates to human welfare. He recognizes that growth is not a goal in itself but can be the means to good and bad ends alike. Offers a balanced analysis of the "cult of growth" in the postwar period that has influenced development, the environment, urbanization and population.
- Environment and Population: A Sourcebook for Teachers*, by Kathryn Horsley, et al., National Education Association, 1201 16th St., N.W., Washington, D. C. 20036 (1972) 112 pp., \$3.75. (Grades 7-12)  
Material relates population variables to various social and natural pressures. Includes

concept statements, discussions, class activities, reference, and audio-visual material recommendations. Concepts are developed at junior and senior high school levels for infusion into courses in Contemporary Issues, Family life, History/Social Studies, Science and Sociology.

*Episodes in Social Inquiry*, Sociological Resources for the Social Studies, Allyn and Bacon, Boston (1972-73). (Grades 10-12)

Four episodes related to population:

Family Size and Society, 54 pp., 10 copies for \$6.30.

Migration Within the United States, 51 pp., 10 copies for \$6.50.

Population Change: A Case Study of Puerto Rico.

Roles of Modern Women, 66 pp., 10 copies for \$6.72.

Each episode is an 8-12 day unit for use in sociology, political science, history and family life courses. Students are expected to work with data in the development and testing of hypotheses, and in the process to become "enlightened skeptics." Each unit includes Student Resources and complete Instructor's Guide.

"Guiding Local Growth," *Equilibrium*, edited by Rob Sauer, Zero Population Growth, 4080 Fabian Way, Palo Alto, Calif. 94303, vol. 1, no. 1 (January 1973) 39 pp., 75¢. (College and adult)

Emphasizes problems of population distribution and offers examples for local citizen action through a series of short essays on the American growth ethos, suburban development, environmental limitations, and growth control and the poor. Annotated bibliography of local growth issues is included.

*Human Ecology, Problems and Solutions*, by Paul R. Ehrlich, Anne H. Ehrlich, and John P. Holdren, W. H. Freeman, San Francisco (1973) 304 pp., \$4.75, paperback. (College and adult)

Introduction to the study of human relationships with the environment that covers the main elements of the population-food-environmental crisis and stresses need for rapid changes in human attitudes especially on reproductive behavior, economic growth, technology, the environment, and conflict resolution.

*An Introduction to Population*, by Kenneth C. Kammeyer, Chandler, San Francisco (1971) 200 pp., \$3.50, paperback. (College)

An introductory text in demography that defines and outlines the history of population study and sources of population data. Discusses migration, composition, mortality, fertility, and world population growth and includes some information on the 1970 United States Census. Clear, readable, and basic.

*An Introduction to Population, Environment, and Society*, by Lawrence Schaefer, E-P Education Services, 625 Orange St., No. 38, New Haven, Conn. 06511 (1972) 290 pp., \$4.50. (Grades 7-12)

A secondary-level teaching manual offering class activities and background information. Includes student workbook, collection of reprints, annotated film list, and bibliography.

*Interchange*, edited by Kathryn Horsley, Population Reference Bureau, Washington, D. C., bi-monthly newsletter, \$2.00 per year. (Grades 7-12)

A population education newsletter for secondary school level teachers and curriculum supervisors. Designed to 1) promote understanding of current population trends and issues; 2) provide information on training opportunities and teaching materials; and 3) outline instructional activities useful in the classroom for illustrating population subjects.

*The Limits to Growth*, by Donella H. Meadows, et al., A Report for the Club of Rome's Project on the Predicament of Mankind, Universe, New York (1972) 207 pp., \$2.75. (College and adult)

Examination of the complex and interrelated factors that determine and ultimately limit growth on this planet: population, industrial production, and pollution.

*The Local Community: A Handbook for Teachers*, The High School Geography Project, Macmillan, New York (1971) 255 pp., \$5.32. (Grades 10-12)

A demonstration of how to work with current and local population data. The handbook interprets the community through concepts used by geographers. Population activities are used to explore the size of the local community, its demographic composition, and its population history. Various United States Census Bureau materials are identified and suggested for use in classrooms.

*The Morality of Abortion: Legal and Historical Perspectives*, by John T. Noonan, Jr., Harvard University Press, Cambridge (1970) 276 pp., \$2.95. (College and adult)

Thoughtful analysis of abortion issues, particularly from Catholic, Protestant, and

- legal viewpoints. Examines the question of one person's freedom to obtain an abortion as the denial of another person's right to live. Questions the view of those who see abortion as a national solution to the crisis of population growth.
- More: The Interfaces Between Population, Economic Growth and the Environment*, The League of Women Voters of the United States, 1730 M St., N.W., Washington, D. C. 20036 (April 1972) 44 pp., 75¢. (High school and adult)
- Statement of demographic factors influencing population change, distribution, and growth and description of the relationship between economic, environmental, and population factors. Some attention is given to policy implications and government programs. Topical bibliography and listing of involved private organizations as well as public agencies are offered.
- "The Nonsense Explosion: Overpopulation as a Crisis Issue," by Ben Wattenberg, *The New Republic* (April 4-11, 1970) pp. 18-23. (High school and adult)
- An essay criticizing the crisis approach to population problems. It's not how many people, but what these people do or don't do in terms of population distribution, pollution, resource depletion, and family planning that causes problems.
- One Earth, Many People: The Challenge of Human Population Growth*, by Laurence Pringle, Macmillan, New York (1971) 85 pp., \$4.95. (Grades 7-12)
- A presentation of divergent views of biologists, economists, and demographers on continued population growth. The author states that we must aim for zero population growth. A good capsule statement of population problems for student reading.
- Open Space in the Inner City*, by Arthur Tress, Visual Arts Program New York State Council on the Arts, James Kenmore Book Store, New York State Historical Association, Cooperstown, N.Y., photographic portfolio, \$5.00.
- A collection of 50 large black and white photographs showing that the quality of urban life isn't keeping up with the advances of our modern life. In addition to depicting the decay of the city, some photos show a positive approach to the urban environment, illustrating how space can be used—particularly for recreational purposes. This collection offers a large selection of springboards to a discussion of many social, economic, political, and esthetic issues.
- Our Overcrowded World*, by Tadd Fisher, Parents' Magazine Press, 52 Vanderbilt Ave., New York 10017 (1969) 256 pp., \$4.50. (High school and college)
- An analysis of population problems in the United States and in the world. Traces the historical importance of population dynamics—in relation to development issues such as urbanization. The impact of technology on food production is treated as well as policy and moral aspects of population size, contraception, and family planning.
- Population*, by Valerie Oppenheimer, Foreign Policy Association, 345 E. 46th St., New York 10017, *Headline* series no. 206 (1971) 95 pp., \$1.00. (Grades 10-12)
- Deals with problems of rapid population growth in an urgent but "noncrisis" manner, touching on industrialized as well as developing nations. One section offers a variety of alternatives for reducing growth, including changing women's roles, maternal child care centers, population education, abortion, and sterilization. Includes discussion and reading references to be used in planning a unit on population dynamics.
- Population Crisis: An Interdisciplinary Perspective*, edited by Sue Titus Reid and David L. Lyon, Scott Foresman, Glenview, Ill. (1972) \$2.95. (College)
- Thirty-three essays on the population problem, its control and impact on man and his environment. Opposing points of view are presented.
- The Population Dilemma*, edited by Philip N. Hauser for the American Assembly, Prentice-Hall, Englewood Cliffs, N.J. (1969) 206 pp., \$2.45. (College and adult)
- A review of the facts of population growth, problems for economic development, resource adequacy, and population control. Papers were initially background reading for the discussion of population problems during the 23rd American Assembly Conference in 1963. In this revised and updated edition the analysis is nontechnical, presenting an overview of the issues.
- "Population Education," special issue of *Social Education*, guest edited by Stephen Viederman, National Council for the Social Studies, 1201 16th St., N.W., Washington, D. C. 20036, vol. 36, no. 4 (April 1972) \$1.50. (Grades 9-12)
- Issue gives theoretical basis for both content of and approach to population education as part of school curricula in the United States. A section on sources for population education includes comprehensive annotations of teacher and student materials, both written and audio-visual.

*Population and the American Future*, The Commission on Population Growth and the American Future, Superintendent of Documents, U.S. Government Printing Office, Wash-

ington, D. C. 20402 (1972) 186 pp., \$1.75. (High school and adult)

The report of the Commission's two-year study on the economic, social, and environmental implications of United States population growth. Included are recommendations, dissenting statements by individual Commission members, and references and lists of the more than 100 commissioned research papers.

*Population Growth and the Complex Society*, edited by Helen MacGill Hughes, Sociological Resources for the Social Studies, Allyn and Bacon, Boston (1972) 212 pp., \$1.68. (Grades 11-12)

A collection of 19 adapted articles by various social scientists who have examined the complex relationship between population size, distribution, and composition and our rapidly changing society. The reader must draw many of the relationships himself but he is helped with a series of questions preceding each article. Sophisticated content, but written in an easy and interesting style for high school students interested in social change.

*Population Profiles*, by Leon Bouvier and Everett Lee, Center for Information on America, Box C, Washington, Conn. 06793 (1972-73) 12 eight-page leaflets, 50¢ per unit. (Grades 10-12)

A series of illustrated readings for the study of demography in high school social studies. Clear explanations of a variety of population processes are developed through text and visuals. Readings should be supplemented by class activity and discussion.

*Population, Resources and the Environment*, edited by Ronald Ridker, The Commission on Population Growth and the American Future Research Reports, Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402, vol. 3 (1972) 377 pp., \$4.25. (College and adult)

The first of the Commission-authorized research reports to be published, this work draws on the research of 16 experts in a number of disciplines to answer questions on resource and environmental implications of population growth in the United States during the next 30 to 50 years. Part I of the volume covers such topics as future water needs; urban, rural and agricultural considerations; technological change and waste material recovery as well as economic aspects of population stabilization and environmental control. Part II is devoted to two opposing viewpoints on the primary cause of environmental decay: technological development vs. population growth.

"Population: The U.S.—A Problem; The World—A Crisis," *New York Times Sunday Supplement*, write Population Supplement, P.O. Box 6586, Washington, D. C. 20009, (April 30, 1972) single copies are free. (Grades 7-adult)

Supplement contains a statement of the Population Commission's findings and specific recommendations. Also includes statements by outstanding Americans and international figures with spokesmen for minorities, women and religious groups.

"Teaching About Population," *Intercom*, Center for War/Peace Studies, 218 E. 18th St., New York 10003, no. 72 (1973) \$1.50. (Grades 9-12)

A resource guide and program catalyst on population issues. In addition to a context-setting essay, this guide contains a series of lesson plans, a list of teaching materials on population, an annotated list of films, books and games, and a description of organization activities.

*Teaching Notes on Population: An Occasional Newsletter for College Teachers*, edited by Parker G. Marden, write Edith Ehrman, Mgr., Foreign Area Materials Center, 60 E. 42nd St., New York 10017, periodical, free. (College)

Newsletter contains evaluations of textbooks and other teaching materials. Ideas and suggestions for presenting different aspects of the systematic study of population to undergraduate students are offered.

We, *The Americans*, U.S. Bureau of the Census, Superintendent of Documents, U.S. Government Printing Office, Washington, D. C. 20402 (1972-73) series of booklets, 35¢ each. (Grades 7-12)

A series of short well-illustrated reports on the 1970 Census written for junior and senior high school students. Booklets available in the "We" series are: "We, The Americans—Who We Are," "We, The Black Americans," "We, The Americans—Our Homes," "We, The Women." Other subjects prepared for the series include Spanish-Speaking Americans, American Indians, Youth, Immigrants, Our Jobs, The Elderly, Schooling, and Income.

"Where Will the Next 50 Million Americans Live?," *The Population Bulletin*, Population Reference Bureau, Washington, D. C., vol. 27, no. 5 (October 1971) 30 pp., 50¢. (High school and adult)

A discussion of the effects of population growth, urbanization, and suburbanization in

the United States, including some economic, political, and environmental consequences. Suggests alternatives to megalopolitan concentration, including the stimulation of secondary growth centers and the building of new towns. These options are assessed along with types of public policy through which population distribution can be influenced.

*The World Population Dilemma*, by The Population Reference Bureau, Columbia Books, 734 15th St. N.W., Washington, D. C. 20005 (1972) 80 pp., \$2.00. (High school and college)

The relationships between continued population growth and the economy, environmental pollution, racism and nationalism, and world poverty are discussed in a framework that avoids oversimplified linkages between population growth and these crucial social problems. Special attention is given to the United States population problem, with excerpts from the *Interim Report of the Commission on Population Growth and the American Future*.

## FILMS

*Boomsville*—11 min., 16 mm., color (1969). Learning Corp. of America, 711 Fifth Ave., New York 10022. Purchase \$150; rental \$15. (Grades 5-12)

Short animated film produced by the National Film Board of Canada depicting the history of modern urban civilization, particularly migration to North America. The urbanization process is clearly explained and related problems suggested. Little emphasis is directly placed on population growth. No narration.

*Issues in Population: Where the Experts Disagree*—28 min., film strip or slide show (1971). Cornell Film Library, Roberts Hall, Cornell University, Ithaca, N.Y. 14850. Purchase: film \$20, slides \$45; rental \$2. (Grades 9-adult)

After a brief discussion of world population growth, several issues are raised with differing viewpoints given by experts. Topics include population and food, the environment, and population policies in the United States. Aim is to show that controversies among experts do exist and that there are no easy answers. Sound track available on 7-inch tape reels recorded at 7½ inches per second or on tape cassettes.

*Population and the American Future*—60 min., 16 mm., color (1972). Fisher Film Group, 216 E. 49th St., New York 10017. Purchase \$300. Free loan from Modern Talking Pictures, 2323 New Hyde Park Rd., New Hyde Park, N.Y. 11040. (Grades 7-adult)

The official film version of the Report of the Commission on Population Growth and the American Future develops the basic theme that well informed individuals who have access to fertility related services can act in their own behalf while still benefiting the entire society. In assessing this premise of individual freedom, the Commission found that the collective result of such behavior would be the stabilization of the United States population. And the outcome of stabilization may well include increased per capita income, improved governmental services, and reduced demand on our natural resources.

*Population, Boom or Doom?*—60 min., 16 mm., color (1973). ABC Media Concepts, 1330 Avenue of the Americas, New York 10019. Purchase \$250; rental \$25. (Grades 9-adult)

A study of four issues from the Report of the Commission on Population Growth and the American Future: population numbers, current and projected; sex education; contraception and abortion; immigration. Emphasizes the quality of life rather than the population crisis.

*Promise City*—30 min., 16 mm., color (1971). Indiana University, Audio Visual Service, Bloomington, Ind. 47401. Purchase \$350; rental \$11.50. (High school and adult)

This study of depopulation and migration shows the slow death of an Iowa farming community. The smaller farmer can no longer survive in the United States and as a result, young people are moving to more prosperous areas.

*Tomorrow's Children*—17 min., 16 mm., color (1971). Perennial Education, 1825 Willow Rd., Northfield, Ill. 60093. Purchase \$225; rental \$22. (Grades 7-12)

A strong indictment of man's refusal to follow nature's laws of balance. At the same time, the film shows man's potential for responding to the physical and psychological needs of future generations. Suggested solutions are control over our reproduction as well as our consumption patterns. Birth control and family size limitation are emphasized.

*We*—30 or 15 min., 16 mm., color (1973). U.S. Bureau of the Census, National Audio-visual Center, Washington, D. C. 20409. Free loan. (Grades 7-adult)

A portrait of America as reflected in the 1970 Census. Visually presents the key findings of the census—the growth, movement and characteristics of the United States population between 1960 and 1970. Useful as a take-off for exploring any number of demographic or social issues.

# U.S. POPULATION

(population figures in thousands)

	Area (sq. mi.)	Date of admission	First census after admission <sup>1</sup>	1900	1910	1920	1930	1940	1950
United States	3,615,122	—	3,929	76,212	92,228	106,022	123,203	132,165	151,326
Alabama	51,609	1819	128	1,829	2,138	2,348	2,646	2,833	3,062
Alaska	586,412	1959	226	64	64	55	59	73	129
Arizona	113,909	1912	334	123	204	334	436	499	750
Arkansas	53,104	1836	98	1,312	1,574	1,752	1,854	1,949	1,909
California	158,693	1850	93	1,485	2,378	3,427	5,677	6,907	10,586
Colorado	104,247	1876	194	540	799	940	1,036	1,123	1,325
Connecticut	5,009	1788	238	908	1,115	1,381	1,607	1,709	2,007
Delaware	2,057	1787	59	185	202	223	238	267	318
D. of Columbia	67	—	8	279	331	438	487	663	802
Florida	58,560	1845	87	529	753	968	1,468	1,897	2,771
Georgia	58,876	1788	83	2,216	2,609	2,896	2,909	3,124	3,445
Hawaii	6,450	1959	633	154	192	256	368	423	500
Idaho	83,557	1890	89	162	326	432	445	525	589
Illinois	56,400	1818	55	4,822	5,639	6,485	7,631	7,897	8,712
Indiana	36,291	1816	147	2,516	2,701	2,930	3,239	3,428	3,934
Iowa	56,290	1846	192	2,232	2,225	2,404	2,471	2,538	2,621
Kansas	82,264	1861	364	1,470	1,691	1,769	1,881	1,801	1,905
Kentucky	40,395	1792	221	2,147	2,290	2,417	2,615	2,846	2,945
Louisiana	48,523	1812	153	1,382	1,656	1,799	2,102	2,364	2,684
Maine	33,215	1820	298	694	742	768	797	847	914
Maryland	10,577	1788	320	1,188	1,295	1,450	1,632	1,821	2,343
Massachusetts	8,257	1788	379	2,805	3,366	3,852	4,250	4,317	4,691
Michigan	58,216	1837	212	2,241	2,810	3,668	4,842	5,256	6,372
Minnesota	84,068	1858	172	1,751	2,076	2,387	2,564	2,792	2,982
Mississippi	47,716	1817	75	1,551	1,797	1,791	2,010	2,184	2,179
Missouri	69,686	1821	140	3,107	3,293	3,404	3,629	3,785	3,955
Montana	147,138	1889	143	243	376	549	538	559	591
Nebraska	77,227	1867	123	1,066	1,192	1,296	1,378	1,316	1,326
Nevada	110,540	1864	42	42	82	77	91	110	160
New Hampshire	9,304	1788	142	412	431	443	465	492	553
New Jersey	7,836	1787	184	1,884	2,537	3,156	4,041	4,160	4,835
New Mexico	121,666	1912	360	195	327	360	423	532	681
New York	49,576	1788	340	7,269	9,114	10,385	12,588	13,479	14,830
North Carolina	52,586	1789	394	1,894	2,206	2,559	3,170	3,572	4,062
North Dakota	70,665	1889	191	319	577	647	681	642	620
Ohio	41,222	1803	231	4,158	4,767	5,759	6,647	6,908	7,947
Oklahoma	69,919	1907	1,657	790	1,657	2,028	2,396	2,336	2,233
Oregon	96,981	1859	52	414	673	783	954	1,090	1,521
Pennsylvania	45,333	1787	434	6,302	7,665	8,720	9,631	9,900	10,498
Rhode Island	1,214	1790	69	429	543	604	687	713	792
South Carolina	31,055	1788	249	1,340	1,515	1,684	1,739	1,900	2,117
South Dakota	77,047	1889	349	402	584	637	693	643	653
Tennessee	42,244	1796	106	2,021	2,185	2,338	2,617	2,916	3,292
Texas	267,338	1845	213	3,049	3,897	4,663	5,825	6,415	7,711
Utah	84,916	1896	277	277	373	449	508	550	689
Vermont	9,609	1791	154	344	356	352	360	359	378
Virginia	40,817	1788	692	1,854	2,062	2,309	2,422	2,678	3,319
Washington	68,192	1889	357	518	1,142	1,357	1,563	1,736	2,379
West Virginia	24,181	1863	442	959	1,221	1,464	1,729	1,902	2,006
Wisconsin	56,154	1848	305	2,069	2,334	2,632	2,939	3,138	3,435
Wyoming	97,914	1890	63	93	146	194	226	251	291
Puerto Rico <sup>2</sup>	3,435	—	—	953	1,118	1,300	1,544	1,869	2,211

Population totals to the nearest thousand.

Data for 1790-1970 from U.S. Bureau of the Census, U.S. Census of Population: 1970, *Number of Inhabitants, PC(1)-A1*, U.S. Summary (1971). Figures for 1970 population are the latest corrected counts. Provisional birth, death, and infant mortality rates are from U.S. Department of Health, Education, and Welfare, National Center for Health Statistics, *Monthly Vital Statistics Report*, Provisional Statistics, Annual Summary for the United States, 1971, vol. 20, no. 13 (August 30, 1972).

<sup>1</sup> U.S. population is for 1790, the year of the first national census; District of Columbia data are for 1800; California, Idaho, Maine, Rhode Island, and Wyoming populations are for the years of admission.

<sup>2</sup> U.S. Department of Commerce, "24 States Show Net Migration Gains During 1960-70, Census Bureau Reports," News (May 17, 1971).



# DATA SHEET

1980	1970	Percent change, 1960-70	Net migration 1960-70 (percent) <sup>2</sup>	Percent urban, 1970 <sup>3</sup>	Annual births per 1,000 pop., 1971	Annual deaths per 1,000 pop., 1971	Infant mortality rate, 1971 <sup>4</sup>	Population estimates, mid-1972 <sup>5</sup>	Population projections, 1980 <sup>6</sup>	
79,323	203,235	13.3	1.7	73.5	17.3	9.3	19.2	208,232	226,934	United States
3,267	3,444	5.4	-7.1	58.4	19.1	9.7	23.6	3,510	3,565	Alabama
226	302	32.8	7.1	48.4	22.9	5.0	18.3	325	352	Alaska
1,302	1,772	36.0	17.5	79.6	21.0	8.6	18.3	1,945	2,164	Arizona
1,786	1,923	7.7	-4.0	50.0	18.1	10.6	19.9	1,978	2,052	Arkansas
15,717	19,953	27.0	13.4	90.9	16.8	8.5	16.8	20,468	24,226	California
1,754	2,207	25.8	12.3	78.5	18.1	8.1	18.0	2,357	2,636	Colorado
2,535	3,032	19.6	8.5	77.4	14.6	8.5	15.5	3,082	3,551	Connecticut
446	548	22.8	8.5	72.2	17.7	9.0	14.4	565	655	Delaware
764	757	-1.0	-13.1	100.0	33.8	13.9	28.5	748	—	D. of Columbia
4,952	6,789	37.1	26.8	80.5	16.5	11.2	20.7	7,259	8,280	Florida
3,943	4,590	16.4	1.3	60.3	20.4	9.0	21.3	4,720	5,191	Georgia
633	770	21.5	1.7	83.1	20.1	5.7	18.1	809	874	Hawaii
667	713	6.8	-6.2	54.1	19.1	8.4	16.6	756	761	Idaho
10,081	11,114	10.2	-0.4	83.0	17.2	9.6	20.7	11,251	12,256	Illinois
4,662	5,194	11.4	-0.3	64.9	18.3	9.3	18.0	5,291	5,782	Indiana
2,758	2,825	2.4	-6.6	57.2	16.1	10.3	17.0	2,883	2,908	Iowa
2,179	2,249	3.1	-6.0	66.1	15.1	9.6	19.8	2,258	2,334	Kansas
3,038	3,219	5.9	-5.0	52.3	18.1	10.3	20.4	3,299	3,372	Kentucky
3,257	3,643	11.8	-4.0	66.1	20.1	9.2	22.1	3,720	3,975	Louisiana
969	994	2.4	-7.2	50.8	17.3	10.7	16.3	1,029	1,016	Maine
3,101	3,922	26.5	12.4	76.6	14.3	7.9	18.0	4,056	4,782	Maryland
5,149	5,689	10.5	1.4	84.6	15.7	9.9	17.1	5,787	6,277	Massachusetts
7,823	8,875	13.4	0.3	73.8	17.9	8.5	19.2	9,082	10,031	Michigan
3,414	3,805	11.5	-0.7	66.4	16.3	8.9	17.8	3,896	4,245	Minnesota
2,178	2,217	1.8	-12.3	44.5	21.7	10.4	26.6	2,263*	2,245	Mississippi
4,320	4,677	8.3	—	70.1	17.1	10.9	19.0	4,753	5,070	Missouri
675	694	2.9	-8.6	53.4	17.2	9.5	20.7	719	721	Montana
1,411	1,484	5.1	-5.2	61.5	17.0	10.2	17.2	1,525	1,570	Nebraska
285	489	71.3	50.4	80.9	18.9	8.3	22.9	527	673	Nevada
607	738	21.5	11.3	56.4	16.6	9.8	15.6	771	878	New Hampshire
6,067	7,168	18.2	8.0	88.9	15.1	9.2	18.0	7,367	8,300	New Jersey
951	1,016	6.8	-13.6	69.8	21.6	7.5	20.9	1,065	1,088	New Mexico
16,782	18,241	8.7	-0.6	85.6	15.5	10.1	18.6	18,366	19,789	New York
4,556	5,082	11.5	-2.1	45.0	18.6	8.8	22.2	5,214	5,482	North Carolina
632	618	-2.3	-14.9	44.3	17.5	9.2	15.3	632	600	North Dakota
9,706	10,652	9.7	-1.3	75.3	17.7	9.2	18.2	10,783	11,675	Ohio
2,328	2,559	9.9	0.6	68.0	17.2	9.6	18.4	2,634	2,787	Oklahoma
1,769	2,091	18.2	9.0	67.1	15.8	9.3	18.1	2,182	2,421	Oregon
11,319	11,794	4.2	-3.3	71.5	15.2	10.5	18.1	11,926	12,157	Pennsylvania
859	950	10.1	1.5	87.1	15.8	9.8	18.9	968	1,027	Rhode Island
2,383	2,591	8.7	-6.3	47.6	20.2	8.8	22.5	2,665	2,731	South Carolina
681	666	-2.2	-13.9	44.6	17.0	9.9	17.1	679	658	South Dakota
3,567	3,924	10.0	-1.3	58.8	19.1	10.0	21.6	4,031	4,259	Tennessee
9,580	11,197	16.9	1.5	79.7	20.1	8.1	19.5	11,649	12,812	Texas
891	1,059	18.9	-1.2	80.4	25.8	6.8	14.1	1,126	1,234	Utah
390	445	14.0	3.8	32.2	17.1	9.7	15.0	462	504	Vermont
3,967	4,648	17.2	3.6	63.1	16.9	8.2	20.8	4,764	5,229	Virginia
2,853	3,409	19.5	8.7	72.6	15.7	8.8	18.6	3,443	3,958	Washington
1,860	1,744	-6.2	-14.2	39.0	18.0	11.5	21.9	1,781	1,634	West Virginia
3,952	4,418	11.8	0.1	65.9	16.0	9.1	15.7	4,520	4,930	Wisconsin
330	332	0.7	-11.9	60.5	17.4	8.9	21.1	345	342	Wyoming
2,350	2,712	15.4	—	58.1	25.4	6.5	24.5	—	—	Puerto Rico

U.S. Bureau of the Census, U.S. Census of Population: 1970, Number of Inhabitants, PC(1)-A1, U.S. Summary (1971).

Deaths to infants under one year of age per 1,000 live births.

July 1, 1972 population estimates from U.S. Bureau of the Census, "Estimates of the Population of States: July 1, 1971 and 1972," Current Population Reports, Series P-25, No. 488 (September 1972).

\* Population projections (Series 1-E) for 1980 from U.S. Bureau of the Census, "Preliminary Projections of the Population of States: 1975-1990," Current Population Reports, Series P-25, No. 477 (March 1972).

† Population given for 1900 is the 1899 figure; birth and death rates are for 1970.

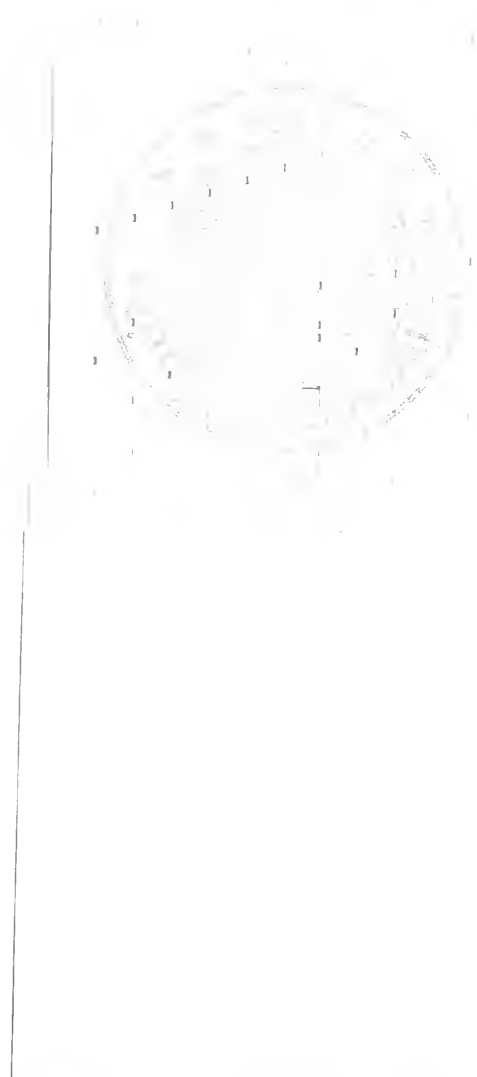


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